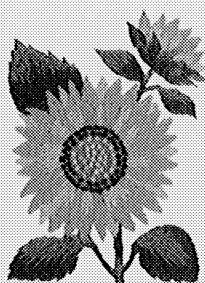


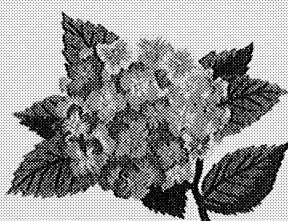
# SINGER®

## *XL-1000*

### INSTRUCTION MANUAL



1 2 3 4  
5 6 7 8



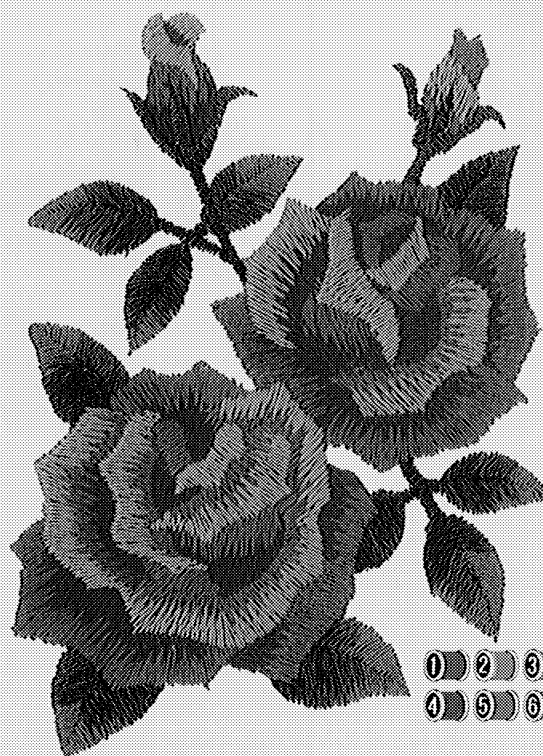
1 2 3 4 5  
6 7 8 9



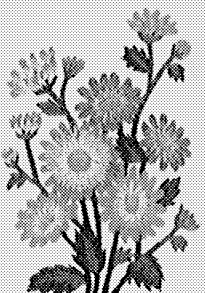
1 2 3 4  
5 6 7 8



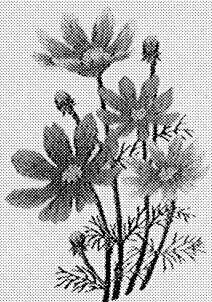
1 2 3 4  
5 6 7 8



1 2 3  
4 5 6



1 2 3 4  
5 6 7 8



1 2 3 4  
5 6 7



1 2 3 4 5  
6 7 8 9 10

## CONGRATULATIONS

...on the purchase of this new Singer® computer sewing machine. This sewing machine employs a system of self-evident logic and operation. However, as simple as the machine is to operate, to achieve the most enjoyment and take full advantage of all the features, it is strongly recommended you familiarize yourself with the machine. Following the instruction manual in sequential order is the best way to build your skills and understanding of all the machines parts and capabilities.

## INSTRUCTION BOOK SINGER® XL-1000

The manufacturer reserves the right to change the appearance, design, or accessories of this sewing machine as considered necessary without any notification or obligation.

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## “IMPORTANT SAFETY INSTRUCTIONS”

“When using an electrical appliance, basic safety precautions should always be followed, including the following:”  
“Read all instructions before using this sewing machine.”

### “DANGER \_\_\_\_\_ To reduce the risk of electric shock:”

1. “An appliance should never be left unattended when plugged in. Always unplug this appliance from the electric outlet immediately after using and before cleaning.”
2. “Always unplug before relamping. Replace bulb with same type rated 5 Watts.”

### “WARNING \_\_\_\_\_ To reduce the risk of burns, fire, electric shock, or injury to persons:”

1. “Do not allow to be used as a toy. Close attention is necessary when this appliance is used by or near children.”
2. “Use this appliance only for its intended use as described in this manual. Use only attachments recommended by the manufacturer as contained in this manual.”
3. “Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged or dropped into water. Return the appliance to the nearest authorized dealer or service center for examination, repair, electrical or mechanical adjustment.”
4. “Never operate the appliance with any air openings blocked. Keep ventilation openings of the sewing machine and foot controller free from the accumulation of lint, dust, and loose cloth.”
5. “Keep fingers away from all moving parts. Special care is required around the sewing machine needle.”
6. “Always use the proper needle plate. The wrong plate can cause the needle to break.”
7. “Do not use bent needles.”
8. “Do not pull or push fabric while stitching. It may deflect the needle causing it to break.”
9. “Switch the sewing machine off (“0”) when making any adjustments in the needle area, such as threading needle, changing needle, threading bobbin, or changing presser foot, and the like.”
10. “Always unplug sewing machine from the electrical outlet when removing covers, lubricating, or when making any other user servicing adjustments mentioned in the instruction manual.”  
“Never drop or insert any object into any opening.”  
“Do not use outdoors.”  
“Do not operate where aerosol (spray) products are being used or where oxygen is being administered.”  
“To disconnect, turn all controls to the off (“0”) position, then remove plug from outlet.”  
“Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord.”

## “SAVE THESE INSTRUCTIONS”

“This sewing machine is intended for household use only.”

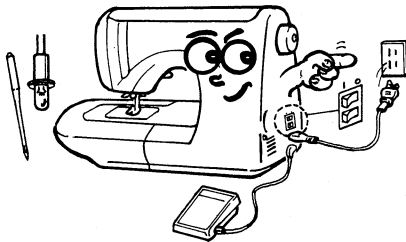


## Please use following foot control:

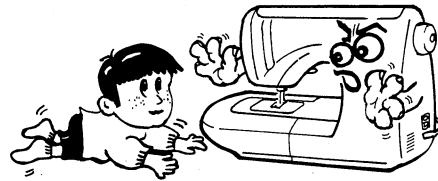
Sewing machine model number	Used with foot controller number
XL-1000	YC-425 (UL, CSA)

"This appliance has a polarized plug (one blade wider than the other). To reduce the risk of electric shock, this plug is intended to fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not modify the plug in any way."

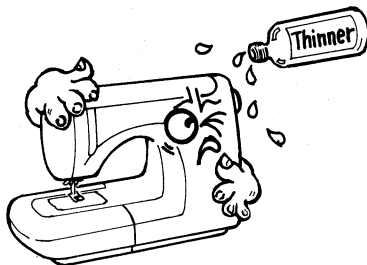
Be sure to turn power switch OFF before replacing sewing machine needle, or lubricating machine.



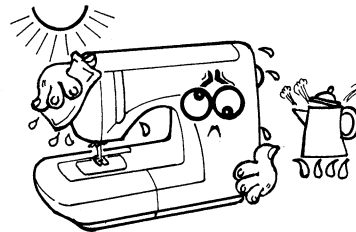
When not in use, be sure to turn power switch OFF and unplug machine.



Do not use thinner or other similar solvents to clean machine.




Do not expose machine to direct sunlight or humid atmosphere.




This sewing machine uses a micro computer and precision electronic circuits consisting of semiconductor components, so please observe the following precautions:

- Keep room temperature at 40°F to 100°F. If temperature of room where machine is used is too low, machine may present problems such as failure to reach its normal sewing speed.
- Motor used in this sewing machine is electronically controlled. When the machine is operated for an extended period of time at low speed, safety device will automatically turn machine OFF preventing motor from overheating. If motor should stop while sewing, turn power switch OFF, and wait about 20 minutes. This will reset safety device.

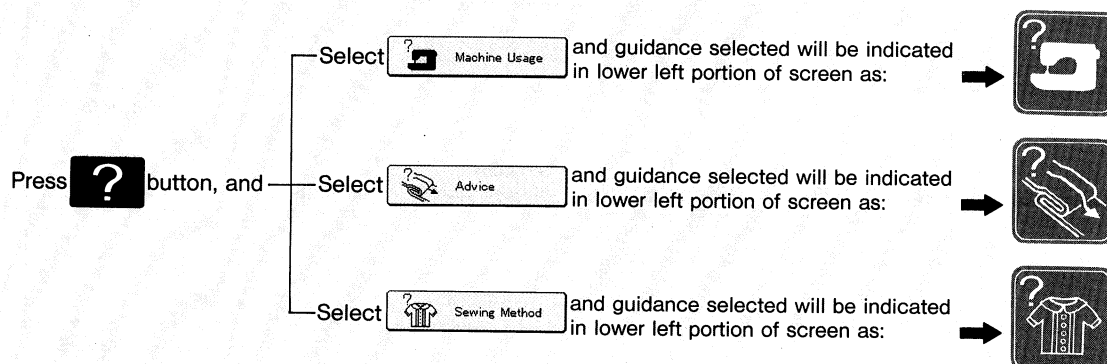
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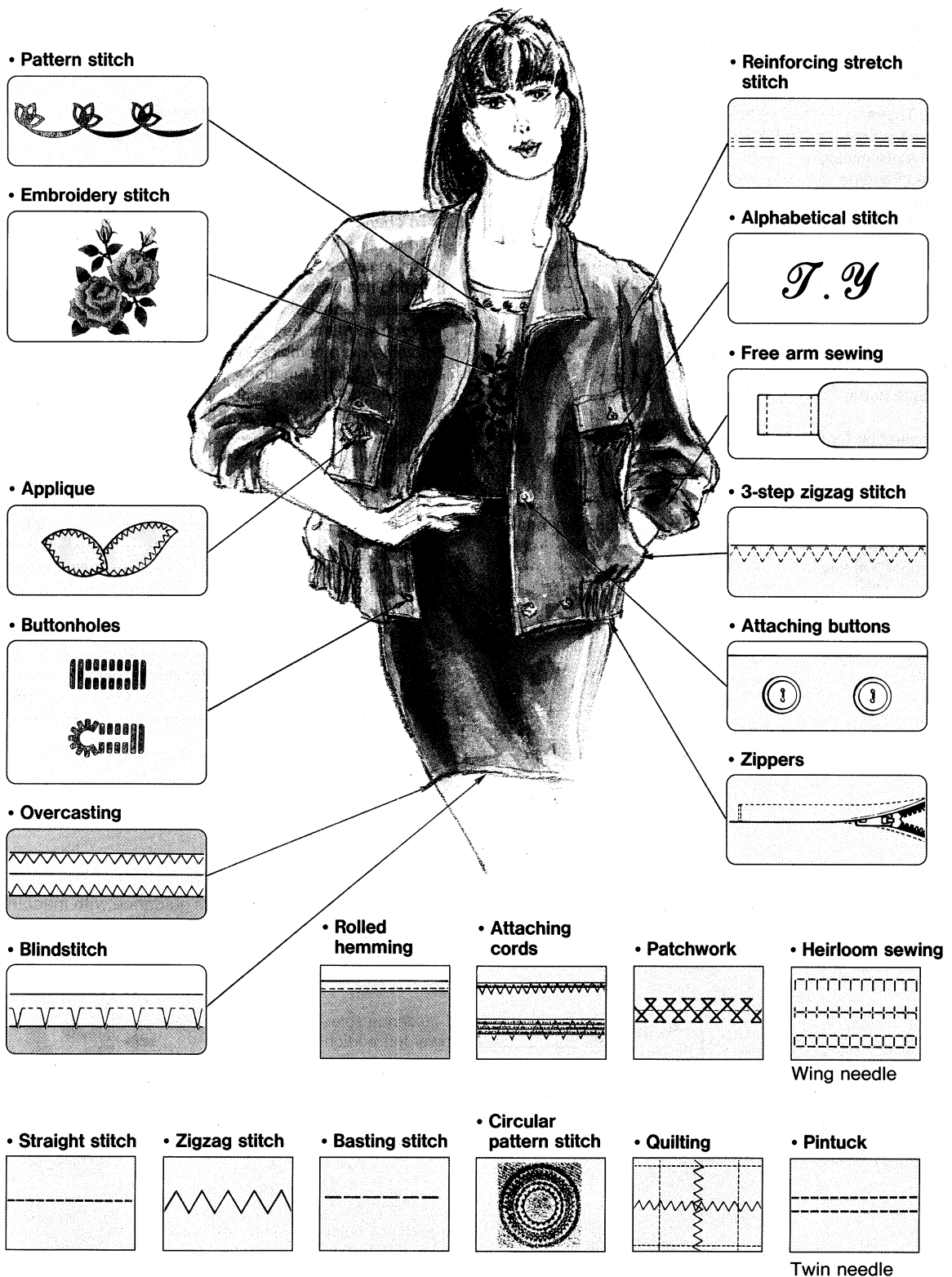
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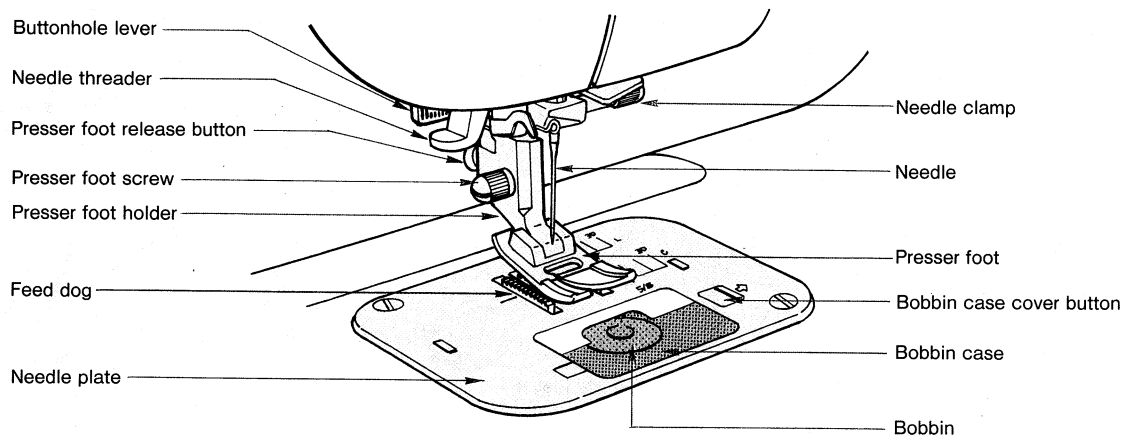
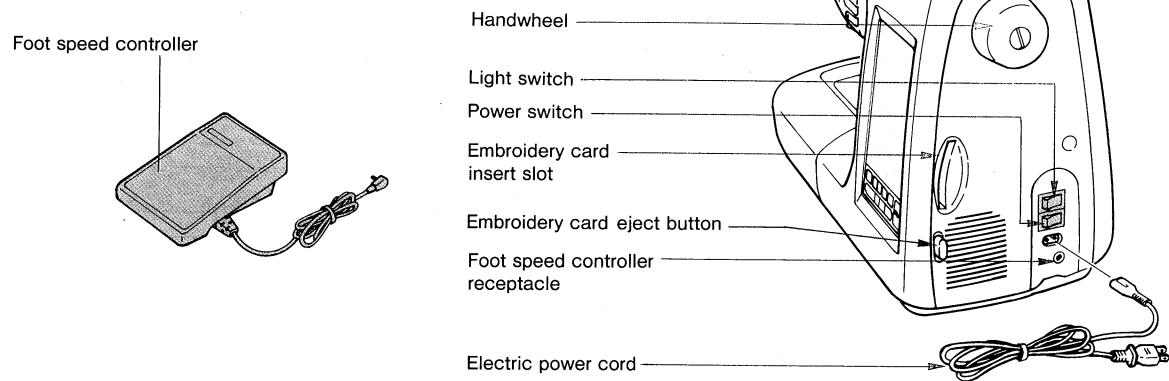
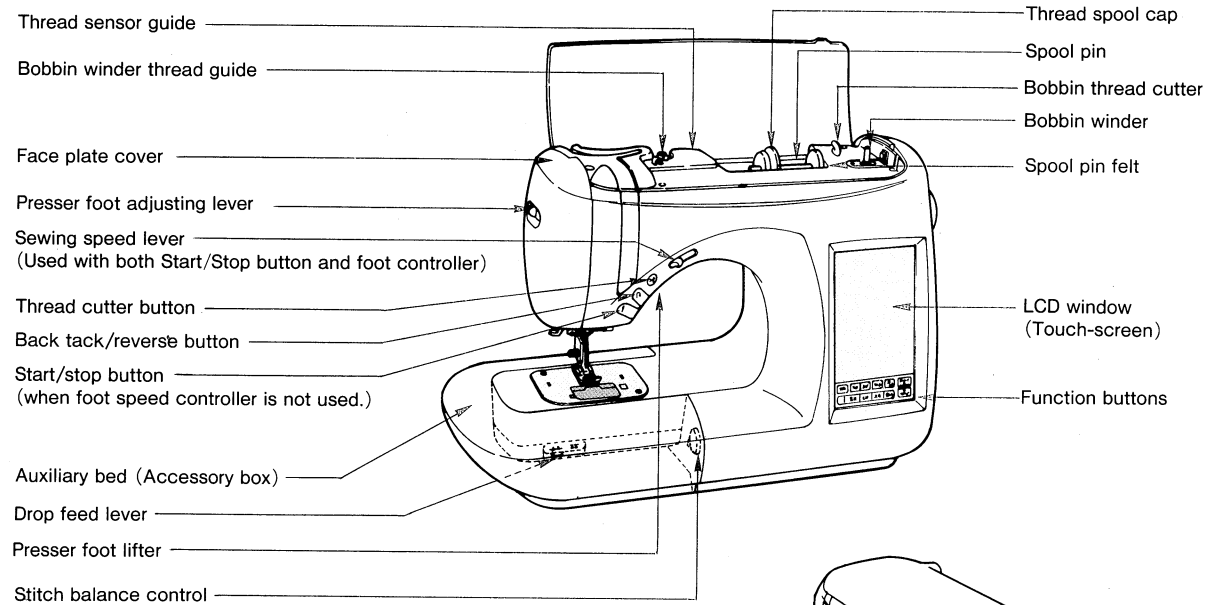
★This computer sewing machine has an internal on-screen instruction book which offers guidance with machine usage, advice on sewing and step-by-step instruction on sewing methods.  
Selection of the guidance functions is through pictograms which are detailed on pages 23, 24 and 25.

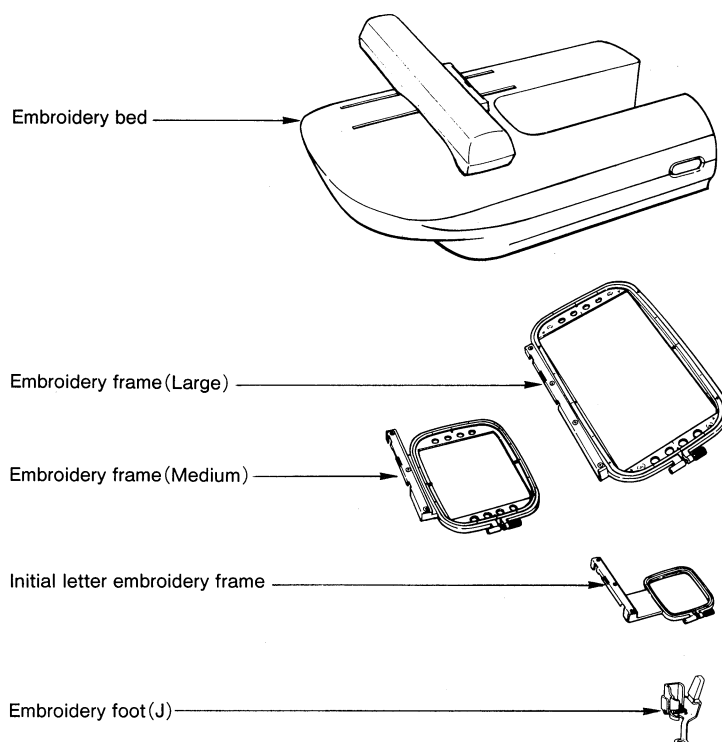


# Various Types Of Stitches

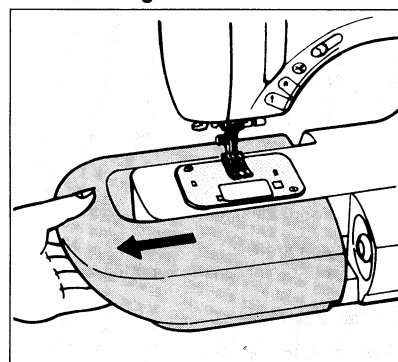


# Principal Parts

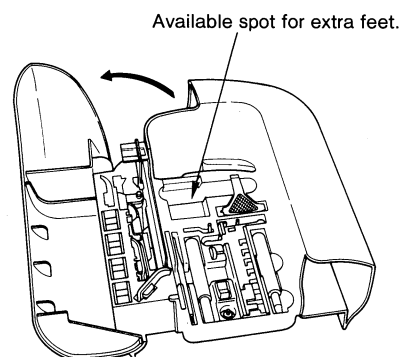




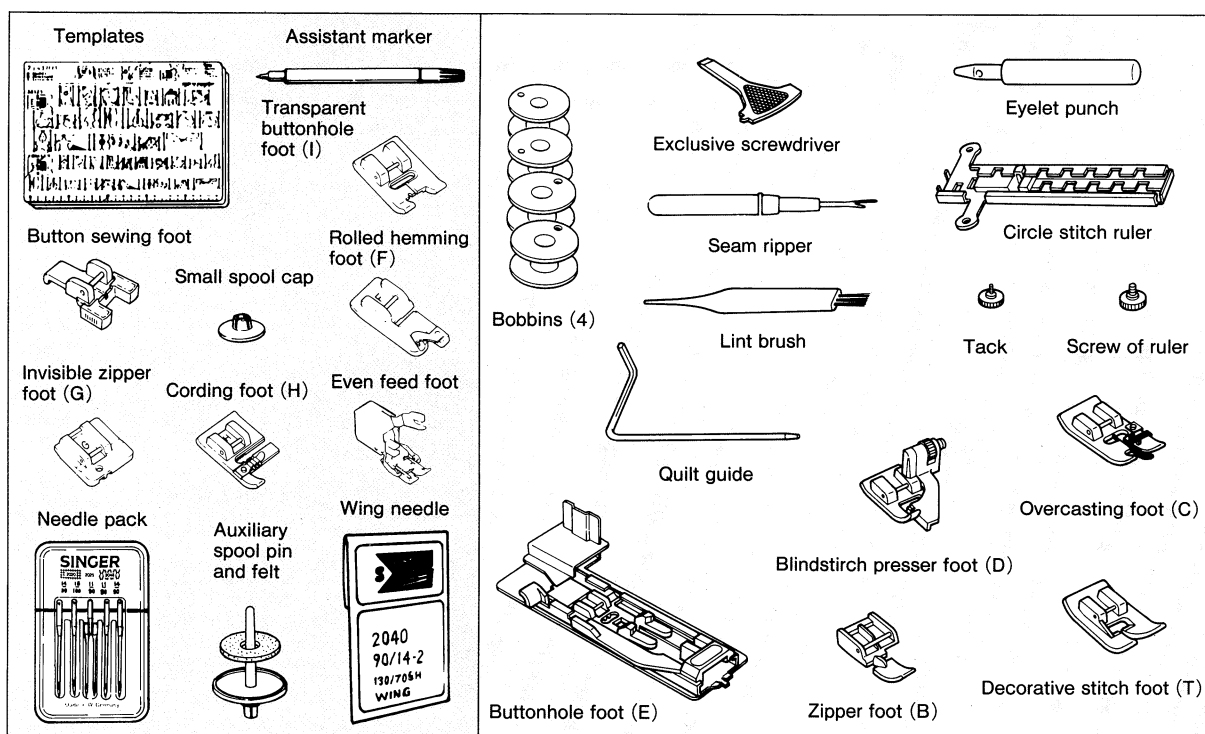
### Converting machine to free-arm



Pull auxiliary bed to left.

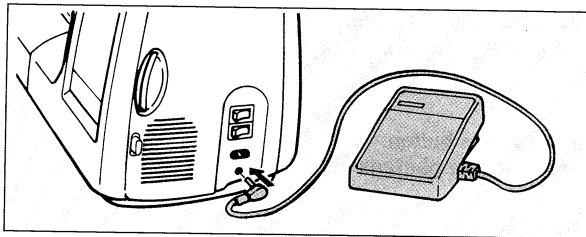


## Accessories

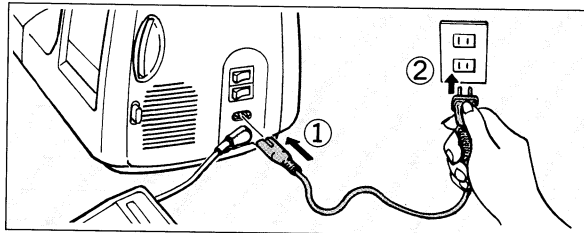


**Note:** ① Standard presser foot (A) is attached at factory.  
 ② See page 65,66 for optional accessories.  
 ③ See page 116 for part numbers of accessories.

## Connecting Machine



Push foot speed controller plug into lower receptacle at right end of machine.

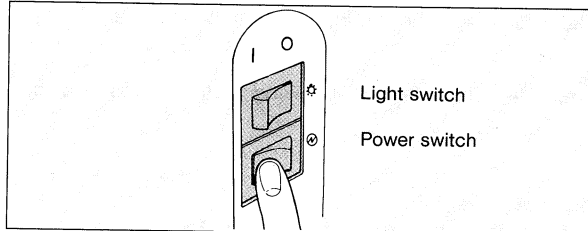


Push power cord plug ① into upper receptacle at right end of machine. Plug ② into electric outlet.

**Note:** If LCD window is too bright or dark to see the stitch patterns, adjust LCD brightness control (see page 10).

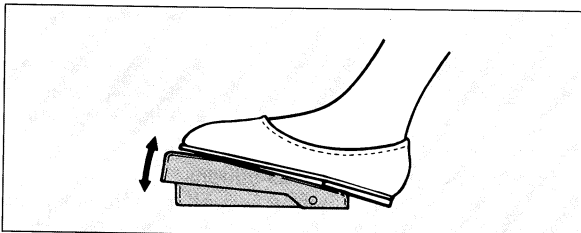
## Running Machine

Power/light switch.



- When "I" side of power switch is pressed machine will be turned on.
- When "O" side of power switch is pressed machine will be turned off.

**Note:** Power switch must be on before light switch will operate.

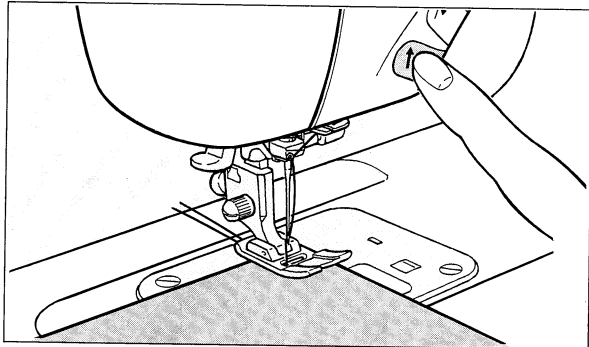


To run machine press foot speed controller. The harder you press, the faster machine will sew.  
To stop machine, remove foot from controller.

## Running machine without foot speed controller

Foot control must be unplugged for start/stop button to operate.

Start/stop button



One press on button starts machine, and another press stops machine.

Explanation of color arrow mark on start/stop button.

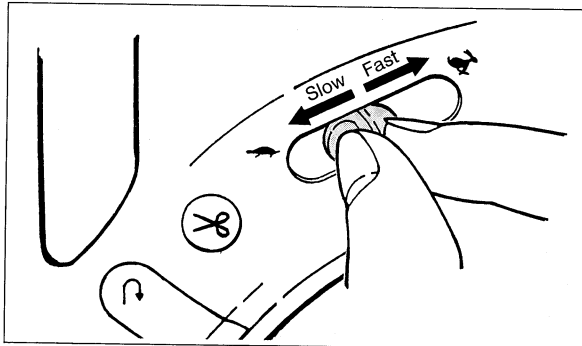
Green: Conditions are correct for sewing.

Red: Conditions are not correct for sewing.

Orange: Welcome screen is illuminated or bobbin winding shaft is in winding position.

- Note:**
- #1. When foot speed controller is plugged in, start/stop button can only be used to stop machine.
  - #2. When foot speed controller is plugged in, lever serves as a top speed limiter.
  - #3. When foot speed controller is plugged in green arrow will only glow when controller is depressed.

Sewing speed lever



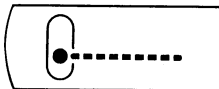
Sliding lever sets desired sewing speed.

# Memory Buttons and Pattern Category Buttons

## Welcome Screen



When the power is turned on, the machine will greet you with a unique "Welcome Screen". To activate all functions you must first touch the screen.



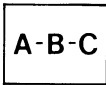
### Utility pattern button:

Used to select patterns most often used in sewing.



### Pattern category button:

Used to select large size patterns, fun-face patterns, animated patterns, single patterns or continuous patterns.



### Alphabet button:

Used to select alphabet stitches (capital letters small letters and script) or numeral stitches.



### Embroidery selector button:

Used after installing embroidery unit. (Note: LCD windows for embroidery will not appear unless the embroidery unit is installed.)



### Advice button:

Used to activate [Machine Usage], [Sewing Method] and [Advice] screens.



### File/Recall button:

File button is used to store selected letters and patterns.

Recall button is used to recall letters and patterns that have been memorized.




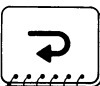
### Thread tension manual button:

Used to change thread tension.



### Automatic Back tack button:

Used when automatic back tack is desired at the beginning and end of seam in straight or zigzag stitch. This function cuts needle and bobbin threads at the end of seam. When activated  is indicated on left upper side of LCD window.




### Previous page button:

Press this button to return to previous page.

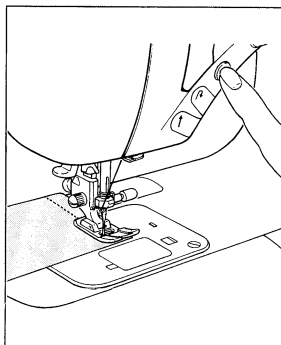


### Next page button:

Press this button to see next page on LCD window.

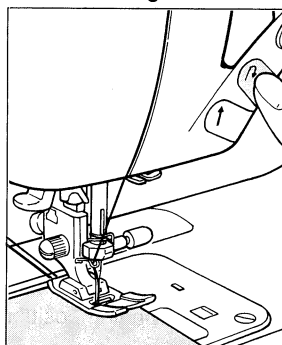
**Note:** Page buttons are only active when more than one page (for example  ) is indicated.

## Back tack/reverse button



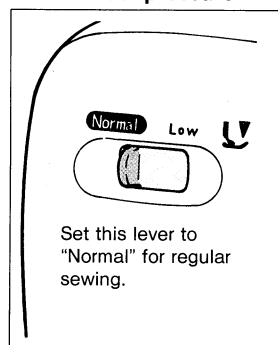
Used to manually back tack beginning and end of seam.

## Thread cutting button



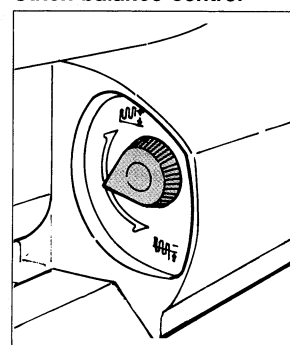
Press button to cut upper and lower thread.

## Presser foot pressure



Adjust pressure of presser foot according to type and thickness of material.

## Stitch balance control



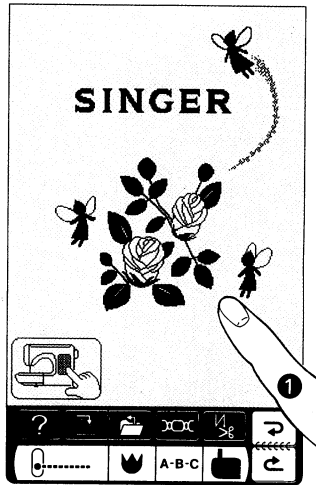
Used to adjust the shape of patterns. (Please see page 41,42.)



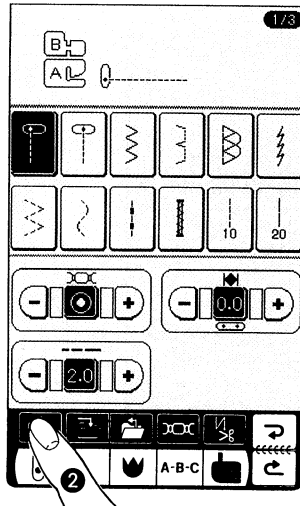
# Adjusting Contrast of Touch-screen

If LCD screen is too bright or dark to clearly view the stitch patterns, adjust screen contrast with the LCD Brightness Control.

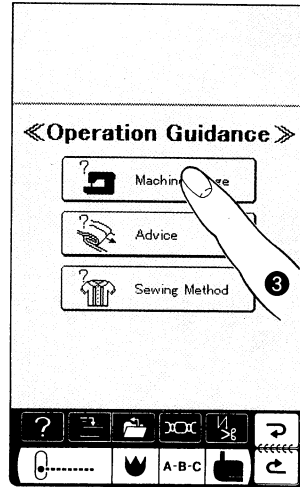
**1** Touch Welcome Screen.



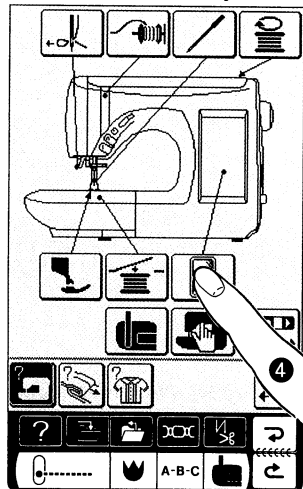
**2** Press **?** button.



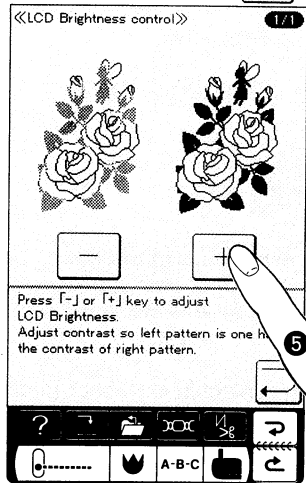
**3** Press **Machine Usage** key.



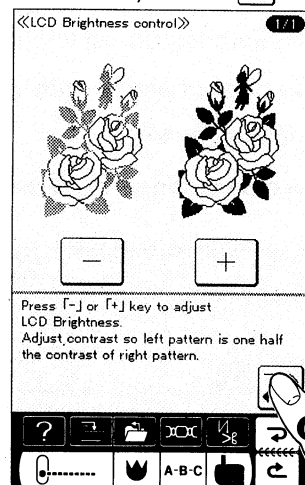
**4** Press **Machine Usage** key.



**5** When too bright, Press **+**,  
too dark, Press **-**.



**6** When contrast is correct, Press **Done**.



**NOTE:** In the event screen is invisible, turn power OFF and then ON again while touching screen. Then adjust contrast following above instructions.

After contrast has been adjusted the **Done** key MUST be pressed to set the adjustment.

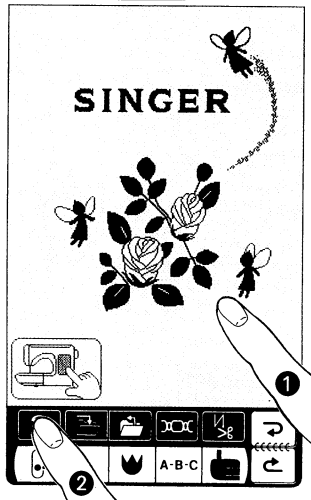
**NOTE:** DO NOT PRESS TOO HARD ON THE TOUCH-SCREEN.....A LIGHT TOUCH IS ALL THAT IS REQUIRED.

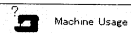
# How To Use Option Key.

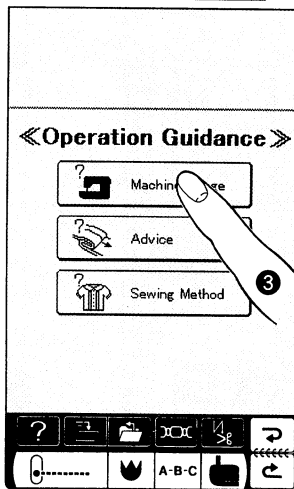
The option screens are used to customize your sewing machine to perform a number of specific functions to your own personal taste.

**1** Touch Welcome Screen.

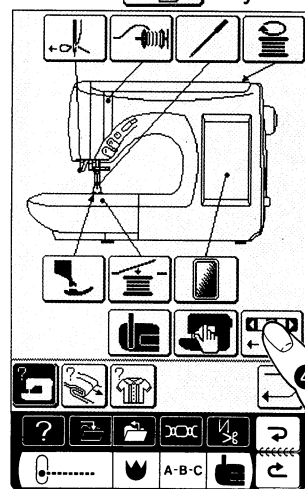
**2** Press  button.




**3** Press  key.





**4** Press  key.

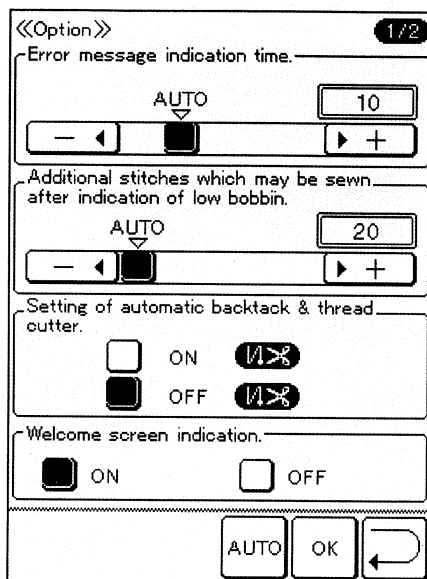


**5** It is possible to change display time of error messages and settings of automatic backtack stitching or thread trimming.

After you have changed chosen options, press  key.

Then, press  key.

To restore all settings to normal, press  key.



## Error message display time:

Length of time during which error message is displayed can be increased or decreased.

## Setting of number of stitches machine is allowed to sew with low bobbin:

The number of stitches that can be sewn after error message "BOBBIN THREAD SUPPLY LOW. CHECK BOBBIN" is displayed and start/stop button is pressed.

## Setting of automatic backtack stitching and thread cutter:

Whether backtacking/thread cutting is automatically specified when selecting pattern or manually specified can be selected.

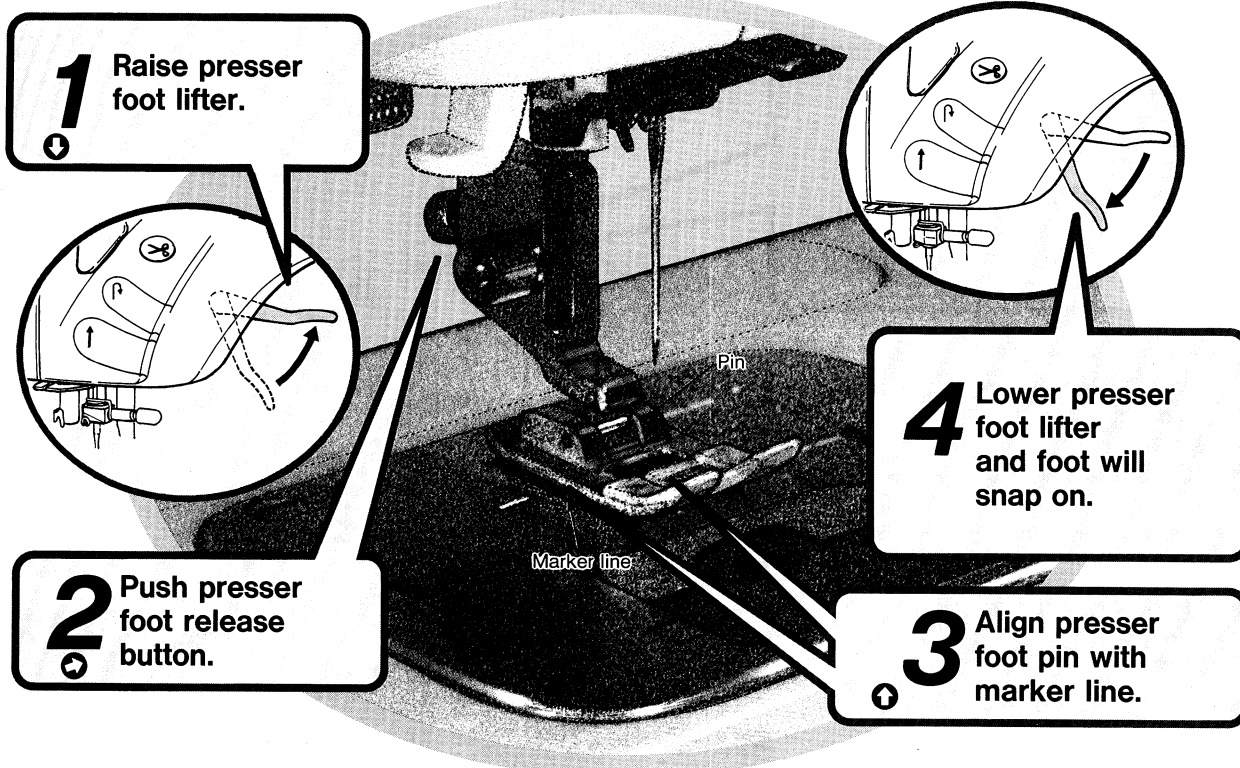
## Welcome screen display:

It is possible to directly display utility sewing screen by electing to not have Welcome screen greet you when power is turned on.

**NOTE:** DO NOT PRESS TOO HARD ON TOUCH-SCREEN.....A LIGHT TOUCH IS ALL THAT IS REQUIRED.

## Changing Presser Feet


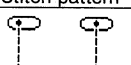
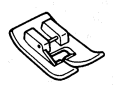

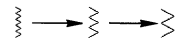
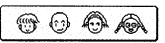

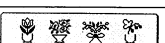

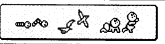









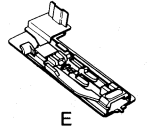
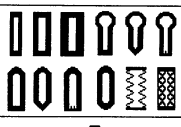

Place needle in highest position.



### Types of Feet and Their Application



**CAUTION:** When changing to feet which require removal and replacement of presser foot screw it is mandatory screw is tightened with exclusive screwdriver (see page 59).

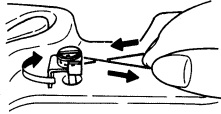
	Typical applications	Stitch pattern		Typical applications	Stitch pattern
<b>Standard presser foot</b>  <b>A</b>	Straight stitch Quilting Pintuck		<b>Decorative stitch foot</b>  <b>T</b>	Large motif patterns	
	Zigzag stitch Applique Quilting	Auto-matic 		Fun Face Patterns	
	Overcasting 3-step zigzag stitch (elastic stitch)			Fun-flower patterns	
	Stretch reinforcing stitch			Animated patterns	
	Overcasting, etc.			Regular Patterns	
	patchwork			Alphabet	ABC abc AbC abc aBc abc
<b>Zipper foot</b>  <b>B</b>	Inserting zipper		<b>Blindstitch presser foot</b>  <b>D</b>	Blindstitch	
<b>Overcasting</b>  <b>C</b>	Overcasting (Overlocking)		<b>Buttonhole foot</b>  <b>E</b>	Automatic buttonholing	
				Bartacking	

Additional and optional feet and applications are covered on pages 65 through 66.

# Winding Bobbin

To wind a bobbin follow steps **1** through **9**.

**4** Wind thread around bobbin winder thread guide.



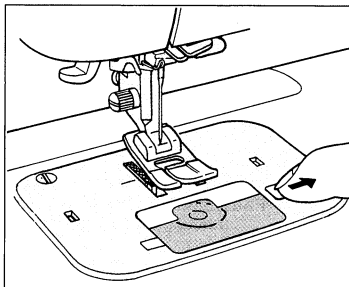
**2** Raise presser foot lifter.

**8** Place bobbin in bobbin case.

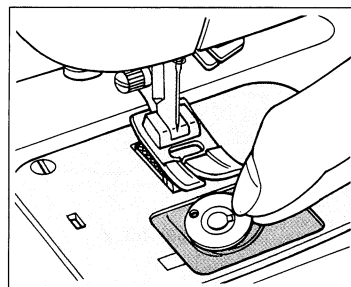
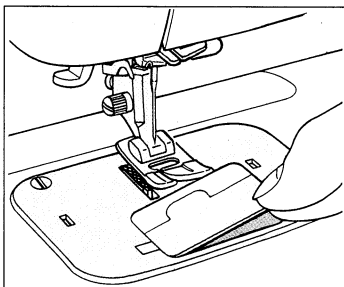
See diagram **9** A, B and C.

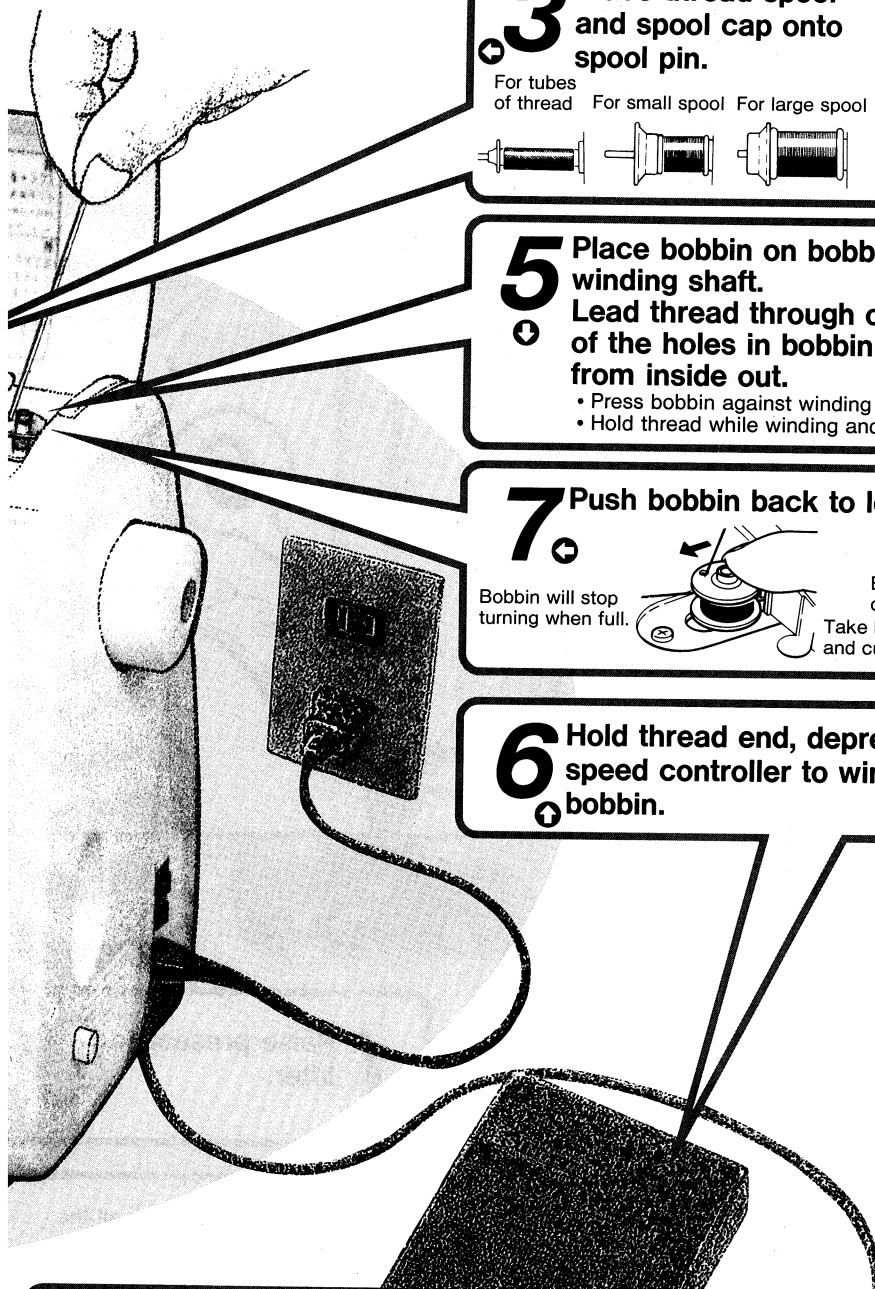
**1**

A. Open bobbin case cover.



B. Take out bobbin.





### 3 Place thread spool and spool cap onto spool pin.

For tubes of thread

For small spool

For large spool

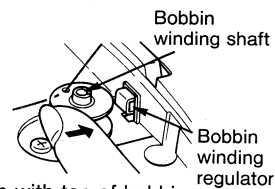


- (1) Be sure notch on spool is on right side.
- (2) Use cap to hold spool in place.

**NOTE:** Some size and style spools of thread do not deliver thread smoothly with horizontal spool and spool cap. In this case use vertical auxiliary spool pin.

### 5 Place bobbin on bobbin winding shaft. Lead thread through one of the holes in bobbin from inside out.

- Press bobbin against winding regulator.
- Hold thread while winding and trim flush with top of bobbin.

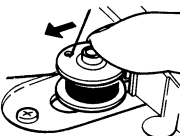


Bobbin winding shaft

Bobbin winding regulator

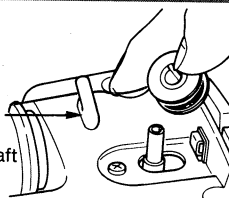
### 7 Push bobbin back to left.

Bobbin will stop turning when full.

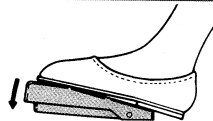


Bobbin thread cutter

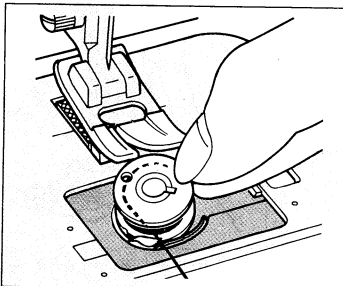
Take bobbin off shaft and cut thread.



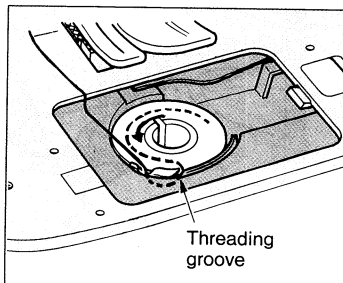
### 6 Hold thread end, depress speed controller to wind bobbin.



### 9 Place bobbin in case with thread pulling off as illustrated.

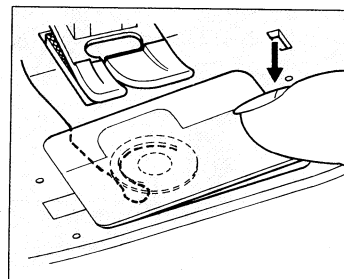


#### B. Pull thread into groove of bobbin case and draw thread to rear of machine.



Threading groove

#### C. Close bobbin case cover.



**NOTE:** ALWAYS USE SINGER BRAND 15 CLASS BOBBINS, OTHER BOBBINS MAY EFFECT PERFORMANCE.

## Threading Machine

To thread machine follow steps **1** through **10**.

**4** Follow threading path arrows on machine. (4,5,6,7)

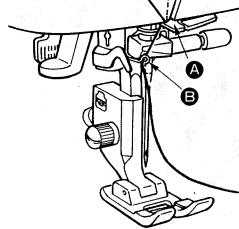
**3** Use both hands to pull thread into groove of thread sensor guide.

**7**

**5**

**6**

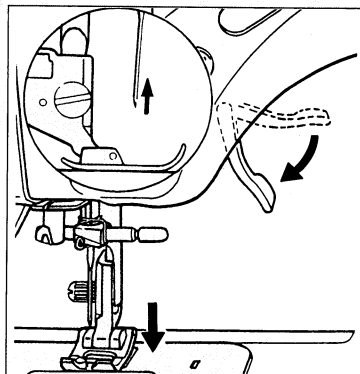
**8** Guide thread behind **A** and into **B** from left.



**1** Raise presser foot lifter.

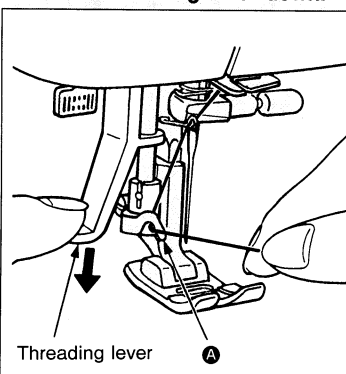
## **9** Automatic Needle Threading

**A.** Lower presser foot lifter.



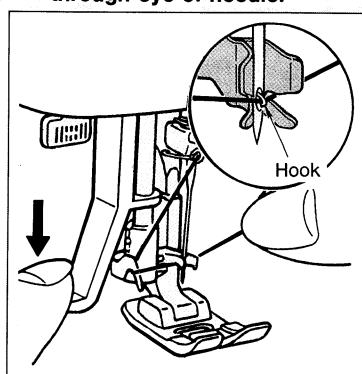
Raise needle to highest position.

**B.** Push threading lever down.

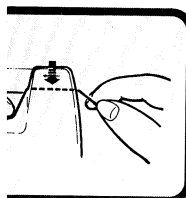


Place thread onto **A**.

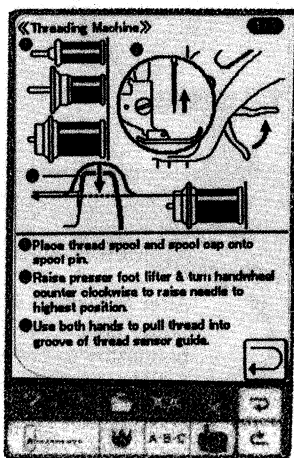
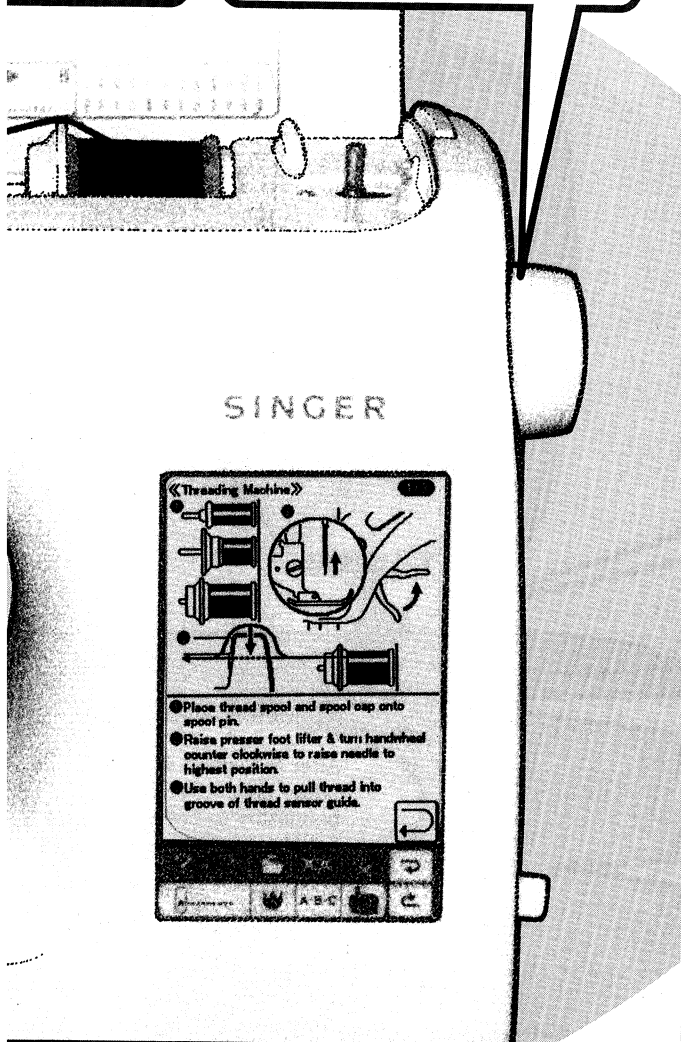
**C.** Push threading lever all the way down and a hook will go through eye of needle.



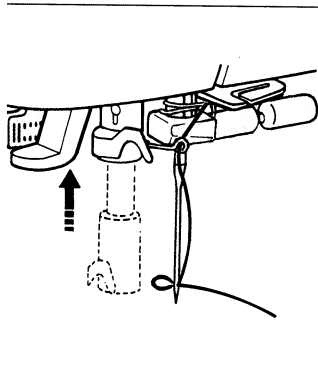
Pass thread in front of needle and below hook.



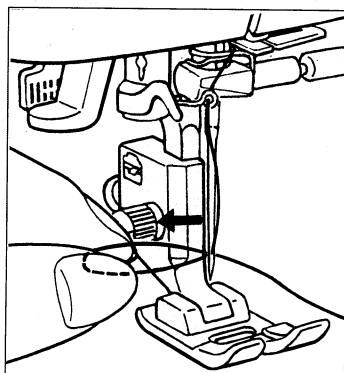
**2** Turn handwheel, counterclockwise to raise needle to highest position.



**D.** Release needle threader.



**E.** Pull loop of thread that is at back of the needle out about 4".

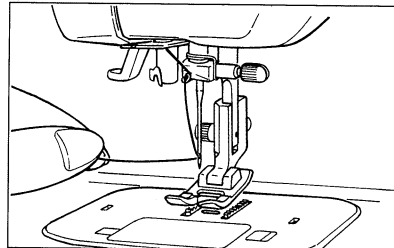


## 10 Pulling up Bobbin Thread.



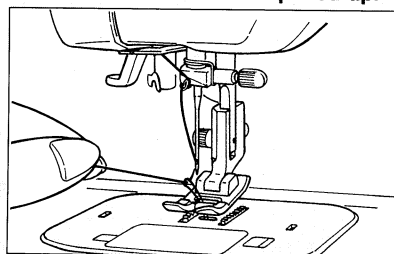
Hold needle thread lightly with left hand and turn handwheel counterclockwise until needle enters needle plate.

**A.** enters needle plate.



Continue turning handwheel while holding needle thread until needle rises.

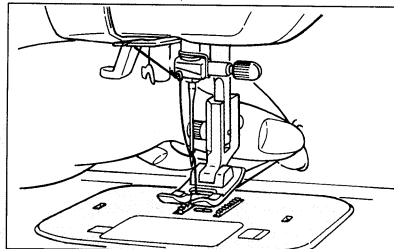
**B.** Tighten hold on needle thread until bobbin thread is pulled up.



Undo loop with fingers.

Pull both needle and bobbin threads out about 4" and pass them under presser foot to back of machine.

**C.** of machine.



### Caution:

1. Do not lower threading lever while sewing machine is in operation.
2. Automatic needle threader will not work on twin needles or wing needles.



# Trial Sewing!

When Welcome screen is pressed utility touch-screen illuminates and left position straight stitch is automatically selected.



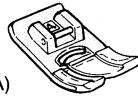
:Full left needle position straight stitch is automatically selected.



:Press this key, center needle position straight stitch is selected.

**2** Pull both needle and bobbin threads to back of machine.

**1** Attach correct presser foot for straight sewing. (A)



**3** Position fabric under presser foot.

**4** Lower presser foot lifter.

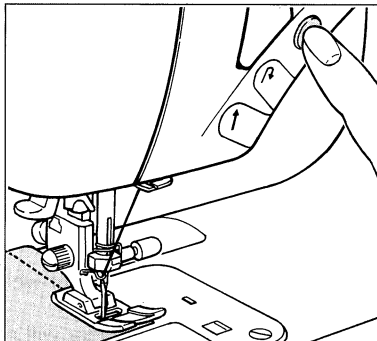
After automatic thread cutter is used, it is not necessary to bring bobbin thread to top.



## 6 How to Operate Automatic Thread Cutter

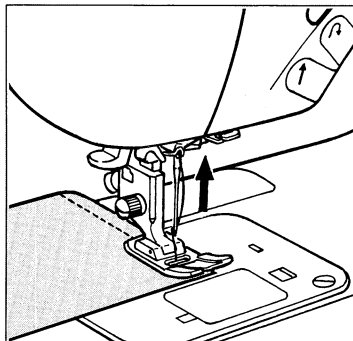
Wait until needle stops

A. completely in down position.



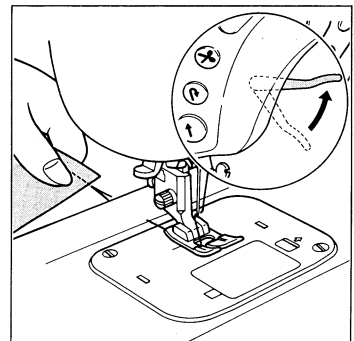
Press thread cutting button.

B. Release button.



Needle moves to up position.

C. Raise presser foot lifter.



Remove fabric.

**NOTE:** Use thread cutting groove located at back of presser foot for cutting thick or special types of thread.

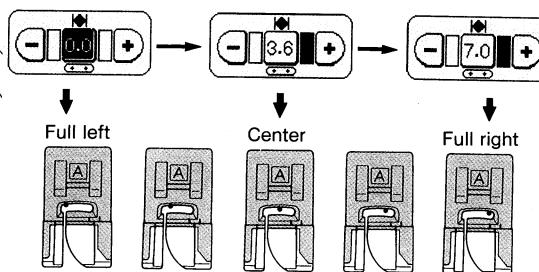




## How to select needle position

(Only works with straight stitch)

Press needle position keys to select from among 22 possible needle positions.



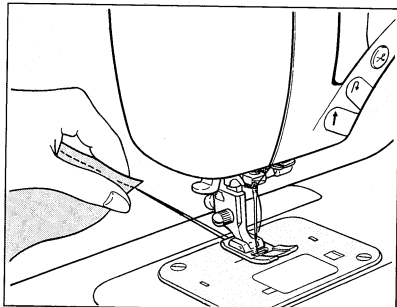
## 5 Begin sewing.

Adjust sewing speed.

Stop sewing.

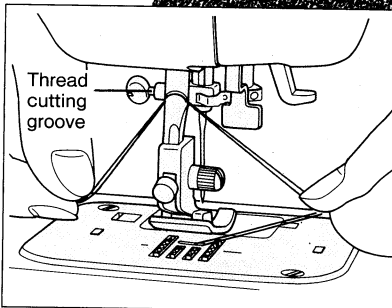
## How to Use The Thread Cutting Groove (How to Knot the Threads)

**1** Remove material from machine.

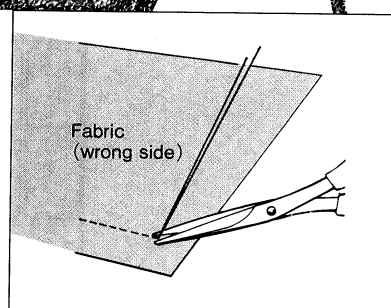


After finishing a seam, raise needle and presser foot, and slowly pull material from under presser foot.

**2** Cut threads, using thread cutting groove. Knot two threads on wrong side of groove.



Hold upper and bobbin threads together, pull them out about 4" and cut them with thread cutting groove located at rear of presser foot.



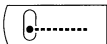
Pull upper thread to wrong side of fabric, and knot upper and bobbin threads. Cut threads as close to knot as possible. This technique is useful for securing pattern stitches.

**Note:** It is advisable to use automatic thread cutter at end of a seam.

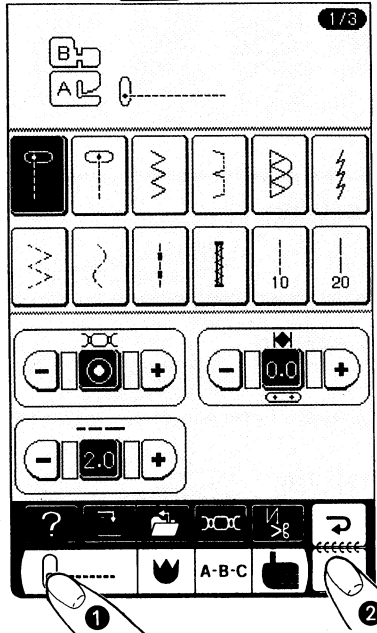
Use thread cutting groove located at back of presser foot for cutting thick threads or special types of thread.

# How To View Utility Patterns On LCD Touch-Screens

## First screen

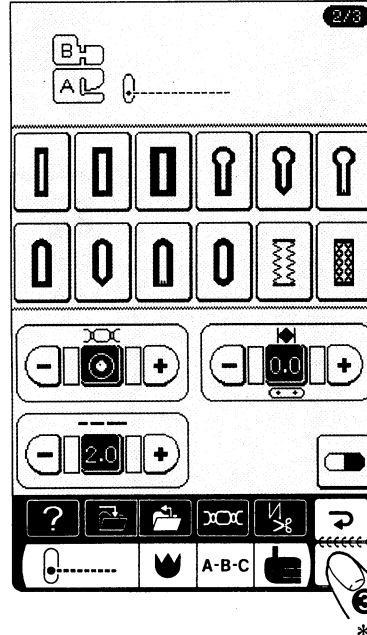
1 Press  button.

2 Press  button.





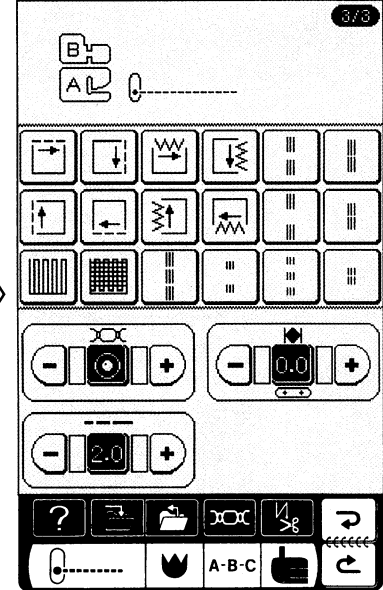
## Second screen



3 Press  button.



## Third screen

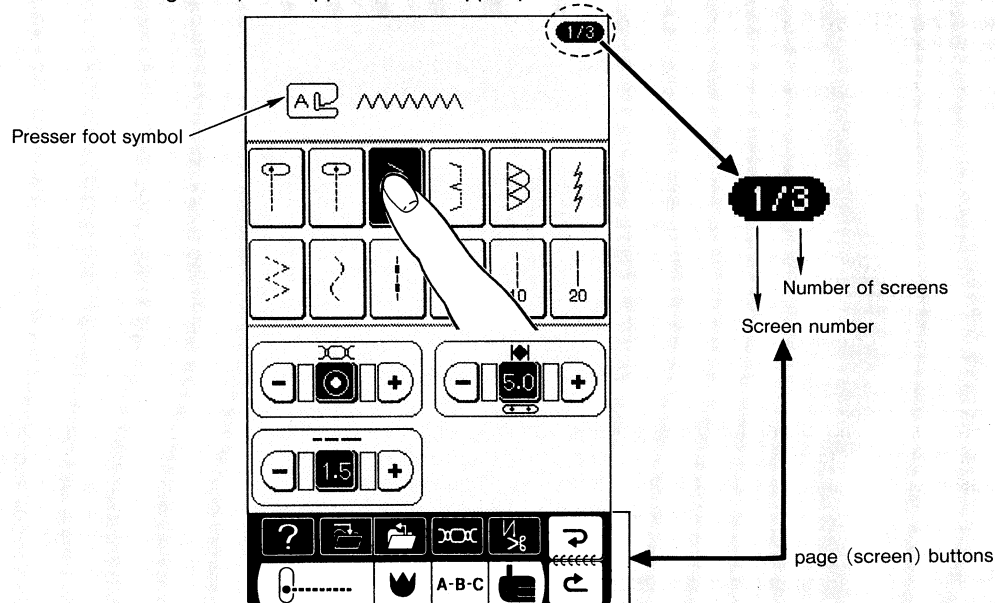
4 Press  or  button\*.



\* Press , returns to first screen.  
Press , returns to previous screen.

## How to select pattern.

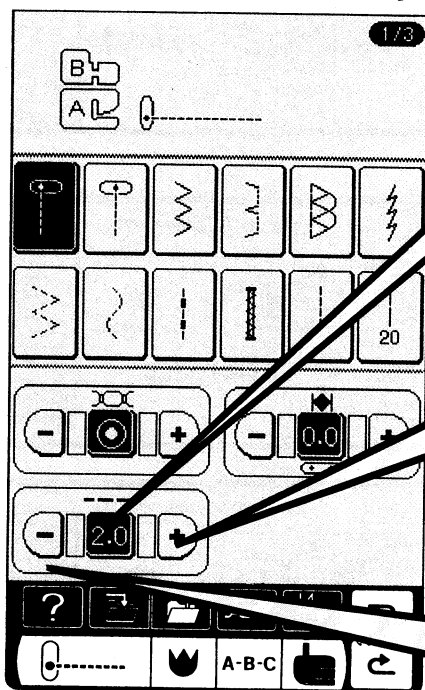
Press desired pattern on LCD touch-screen. The chosen pattern will reverse (show white on a blue background) and appear on the upper portion of LCD screen.



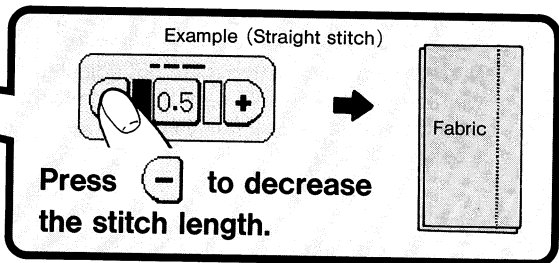
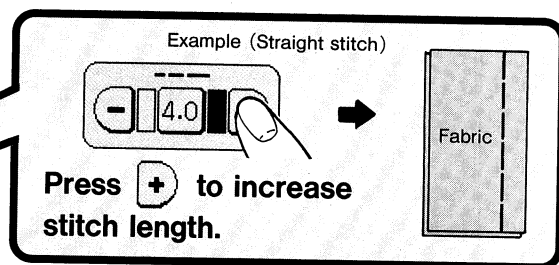
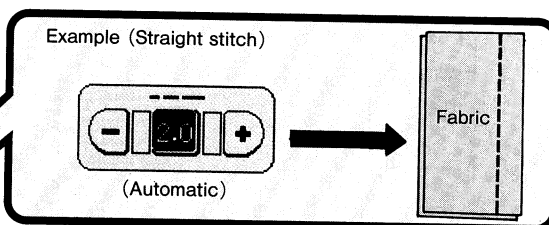
# How to Adjust Stitch Length of Utility Patterns

Machine's stitch patterns are automatically set to an optimum length.  
By using override touch-screen, pattern length can be adjusted as desired.

## How to use stitch length manual adjustment touch-screen key.



**DECORATIVE PATTERNS:** With decorative patterns the stitch length adjustment does not automatically appear. To adjust stitch length of decorative patterns first select individual pattern. Second press and a pop-up screen will appear.



If the stitch length adjustment graphic appears on the pop-up screen then the selected pattern may be adjusted.




## Stitch Length of Each Stitch Pattern

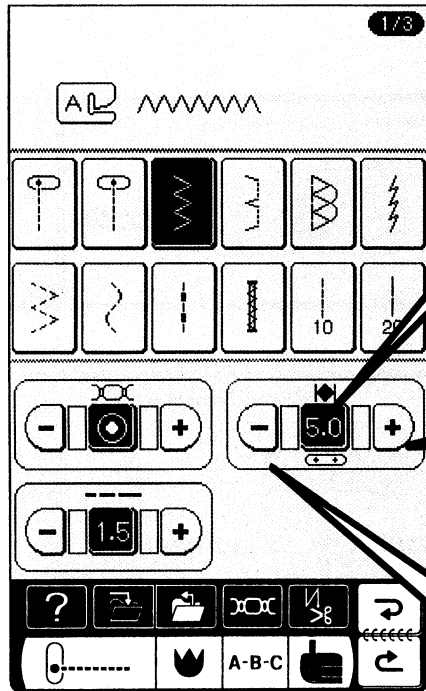
Stitch pattern	Stitch length	
	Automatic	Adjusted
	2.0	0.0~4.0
	1.5	0.0~4.0
	1.0	0.0~4.0
	--	--
	2.0	0.0~4.0
	0.5	0.0~1.0
	0.6	0.0~1.0
	1.0	0.0~2.0


Stitch pattern	Stitch length	
	Automatic	Adjusted
	2.0	0.0~2.0
	2.0	2.0~4.0
	0.4	0.0~4.0
on		

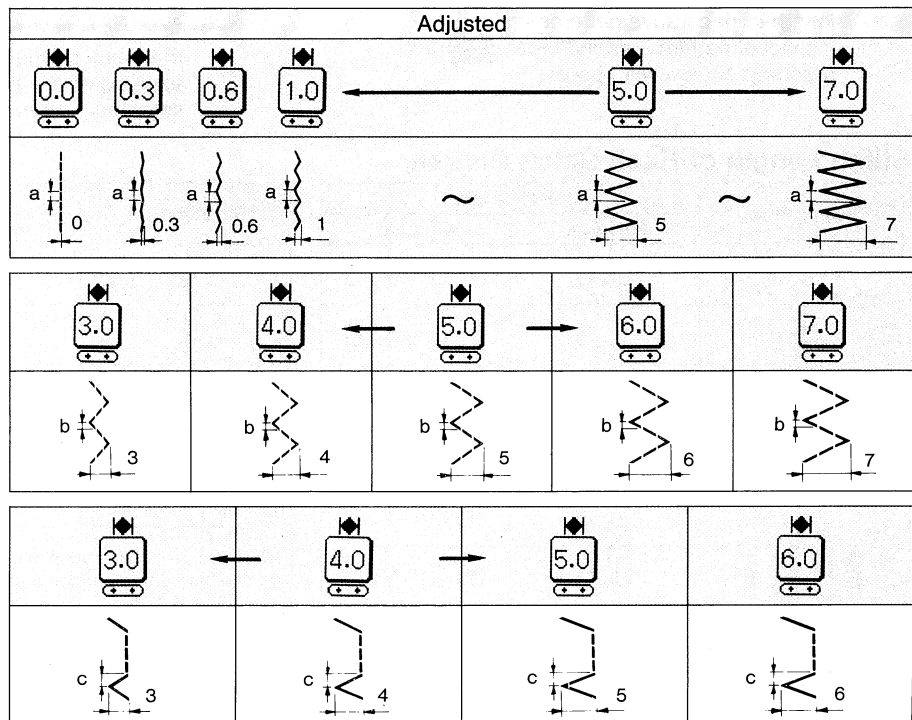
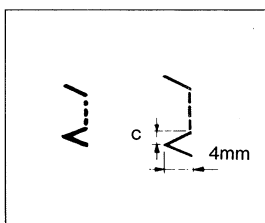
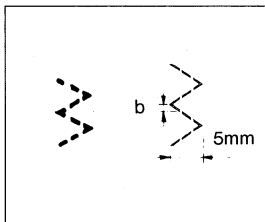
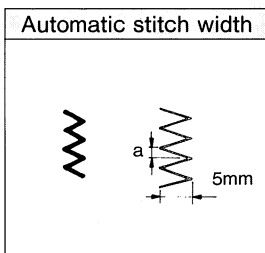
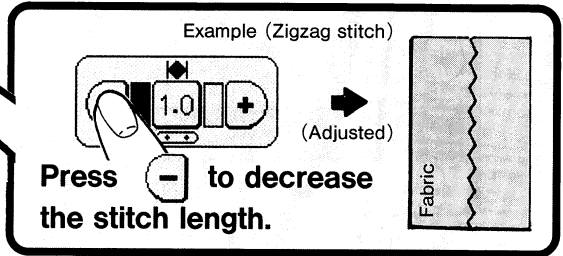
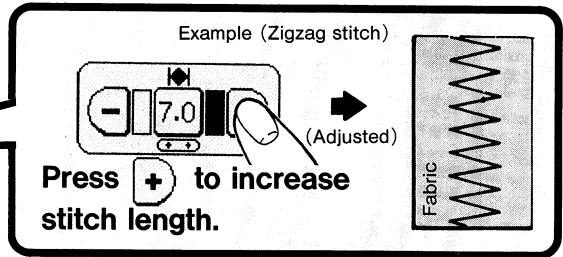
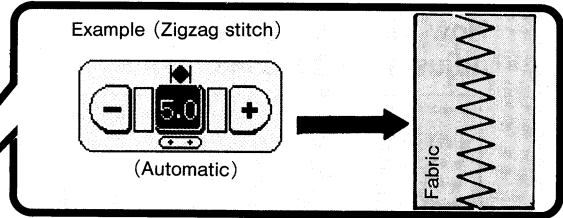
**NOTE:** Occasionally button will show (---) . (---) indicates that pattern cannot be adjusted using stitch length button.  
When stitch length displays (---) the pattern may be able to be adjusted with stitch balance control (see page 41).

# How to Adjust Stitch Width of Utility Patterns

After specifying pattern from among   , if desired, the stitch width may be adjusted by pressing stitch width manual adjustment touch-screen key.



**NOTE:** Decorative patterns are not adjusted with touch-screen width control. Decorative patterns which may be adjusted have a size control .

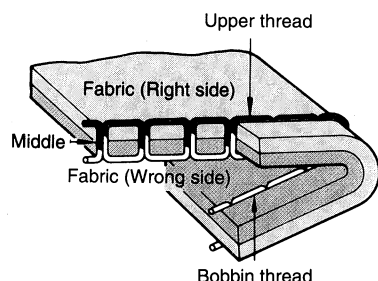


Stitch length a=1.5mm, b=1mm, c=2mm

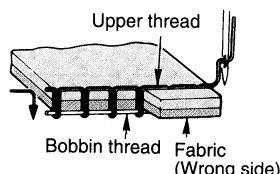
# Automatic Computer Controlled Thread Metering (tension) System

Instead of a mechanical tension system, which controls thread by squeezing it between 2 discs, the XL-1000 controls thread by computer. An automatic computer controlled thread metering system delivers the precise amount of thread for each needle penetration to create the optimal appearance of each stitch. This makes possible, perfectly balanced straight stitch, plus no pucker blind hemming, two color patterns without changing thread, multicolored embroidery without changing bobbin thread, and decorative top-stitching and cross stitching that simulate hand sewn. An override control allows individual modification for specialized effects.

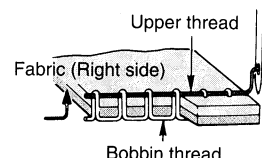
Examples of Automatic Thread Metering:



Straight stitch: Upper and bobbin thread join in middle.



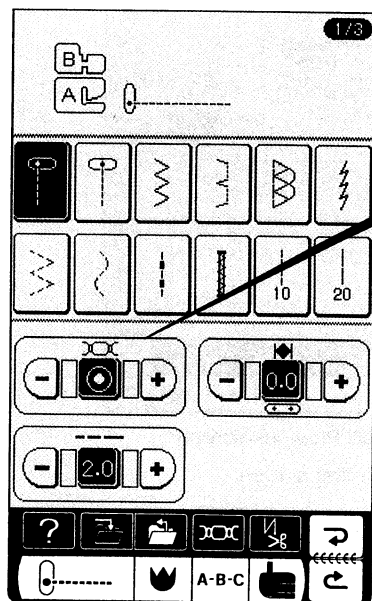
Embroidery and decorative topstitch patterns: Upper and bobbin thread join on wrong side of fabric to optimize top side appearance.



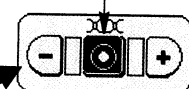
Two-color patterns: Upper and bobbin thread join on right side of fabric.

## How to modify top thread supply.

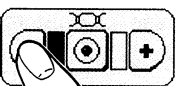
Use thread meter override touch-screen to modify top thread supply (tension).



Indicates that thread metering (tension) is automatic.



Press **+** to decrease top thread supply (increase tension).



Press **-** to increase top thread supply (decrease tension).

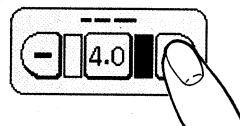
**NOTE:** With decorative patterns the thread meter (tension) override touch-screen does not appear automatically. To make touch-screen appear, first select pattern. Second press **?** and a pop-up screen with the touch-screen will appear. Adjust as above.

## How to shirr and gather.

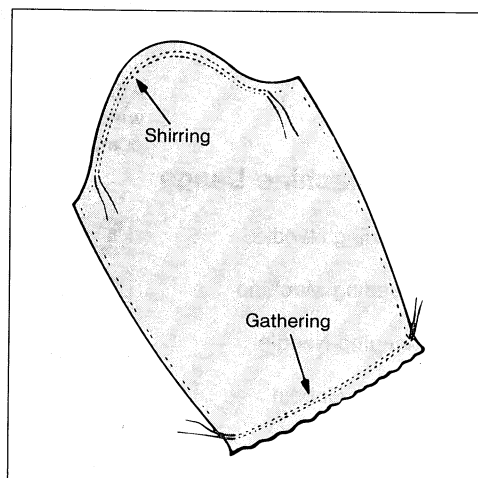
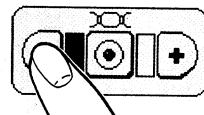
When shirring an armhole or skirt waist, or gathering cuffs or yokes, sew with a long thread length, then pull bobbin thread by hand to gather material.



Set stitch length to 3.0~4.0.



Increase top thread supply.



# 1. How To Use Operation Guidance. "Machine Usage"

Basic sewing machine operations [Machine Usage, Advice and Sewing Method] can be displayed on LCD screens. This allows you to operate your sewing machine without having to refer to your Instruction Manual.

**Example: Winding bobbin thread.**

**1** Press advice button.

**2** Press Machine Usage key.

**3** Press key.

**4** Press next page button.

**5** Press next page button.

**6** Complete bobbin winding\*.

After bobbin winding is completed.....

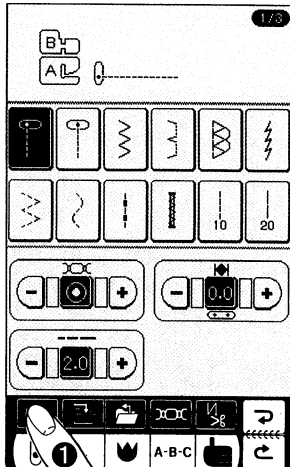
- \* Press , returns to Previous screen.
- \* Press returns to first screen
- \* Press returns to machine Usage
- \* Press , or

**Contents of Machine Usage**

: Threading Needle	: Changing Presser foot	: Embroidery Preparation
: Threading Machine	: Removing Bobbin	: Basic Sewing
: Changing Needle	: LCD Brightness control	: Option • Screen 1 Main unit
: Winding Bobbin		: Screen 2 Embroidery

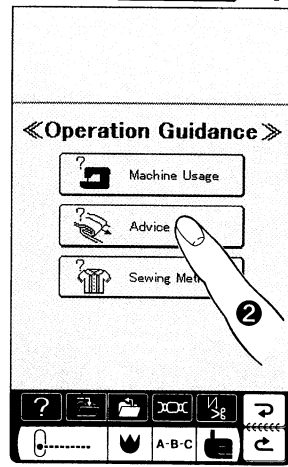
## 2. How To Use Operation Guidance. "Advice"

1 Press advice  button.



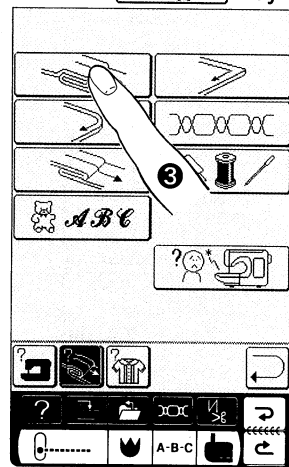
Trouble shooting

2 Press  key.

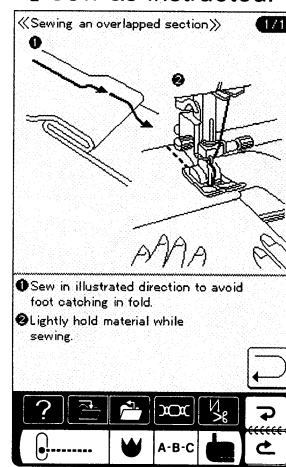


Example: Sewing an overlapped section


3 Press  key.

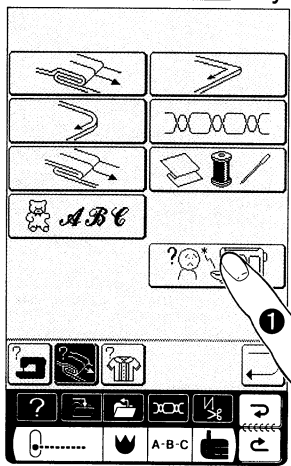



4 Sew as instructed.

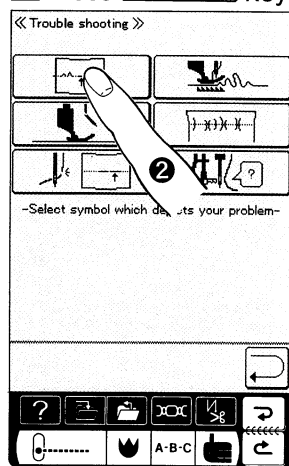


Example: Improper stitch formation

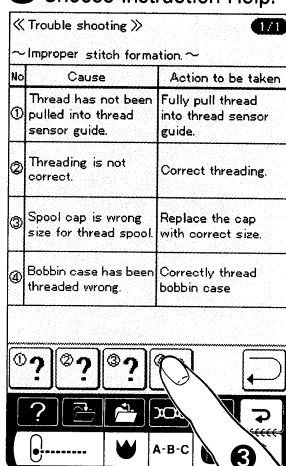
1 Press  key.





2 Press  key.

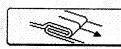

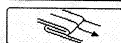
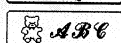

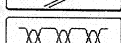




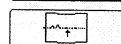

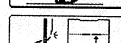
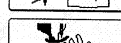
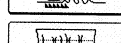
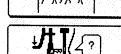
3 Choose Instruction Help.



**NOTE:**  
In the case of Improper stitch formation there are 4 causes and 4 actions to be taken. For instruction press buttons  ~ .

### Contents of Advice

-  : Sewing an overlapped section
-  : Sewing curved angle
-  : Sewing over fabric hurdle
-  : Sewing large patterns and letters.
-  : Changing sewing direction
-  : Straight Stitch Thread tension
-  : Fabric, Thread & Needle Table

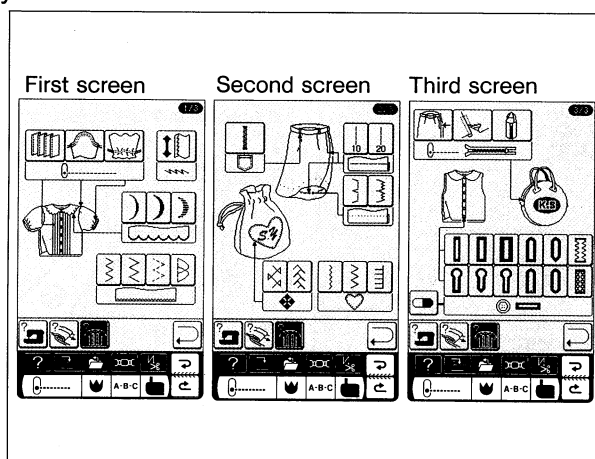
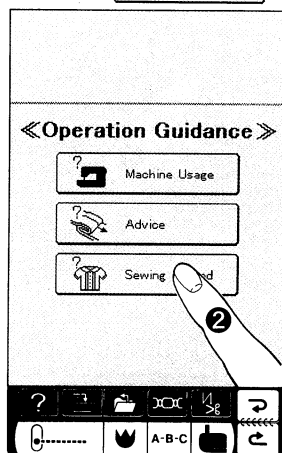
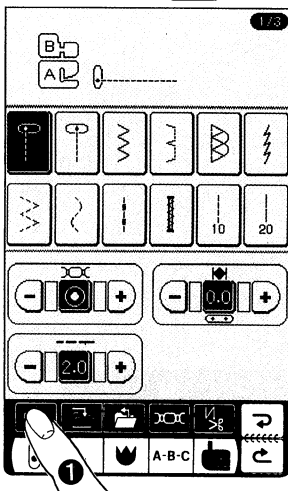
-  : Trouble shooting
-  : Improper stitch formation.
-  : Needle breaks
-  : Thread breaks/Skipped stitches
-  : Machine dose not feed material.
-  : Fabric puckers
-  : Needle cannot be threaded.



### 3. How To Use Operation Guidance. "Sewing Method"

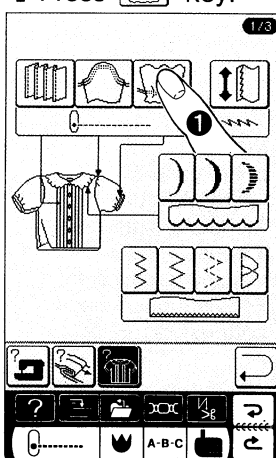
\* When using the "Sewing Method" screens the stitch functions change automatically so it is not necessary to exit the guidance screens to manually enter utility stitch patterns.

- 1 Press advice button.
- 2 Press key.

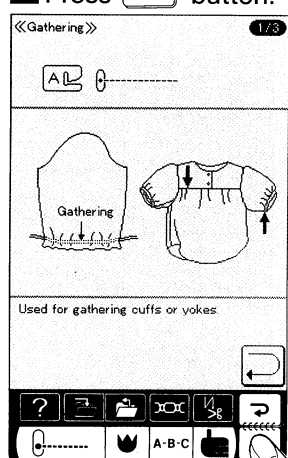


#### Example: Gathering

- 1 Press key.



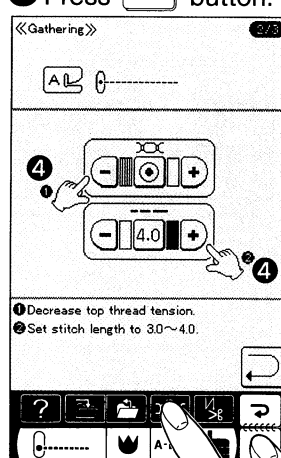
- 2 Press button.



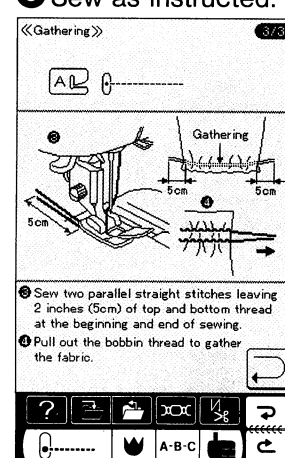
- 3 Press tension button.

- 4 Adjust tension and length.

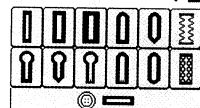
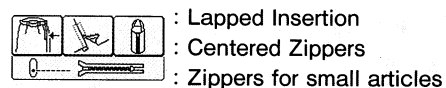
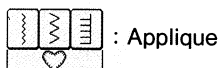
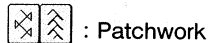
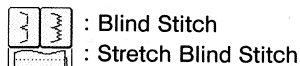
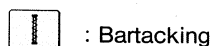
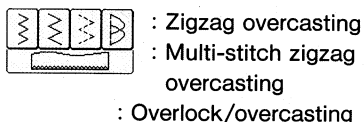
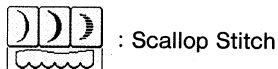
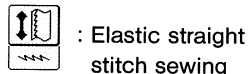
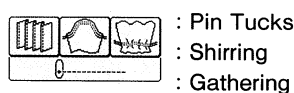
- 5 Press button.



- 6 Sew as instructed.



#### Contents of Sewing Method





# Problem Indicators For Utility Stitches And Pattern Sewing

If machine has not been properly set to sew the start/stop button will glow red and a problem indicator will appear in LCD window advising where problem is located.

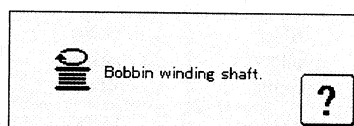
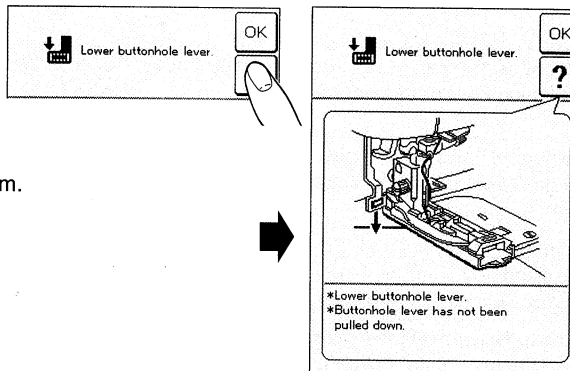
**Note:** When foot speed controller is plugged in start/stop switch will glow red until controller is depressed.

## What to do when problem indicator appears:

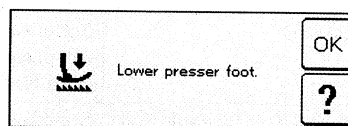
Choose from the following options:

1. Correct the problem (original screen will return)
2. Press **OK** indicating you understand the problem. Then correct the problem.
3. Press **?** which indicates you require help to correct the problem.
4. If you do nothing, after a short time, the problem indication message will disappear.

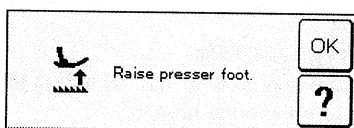
## Example:



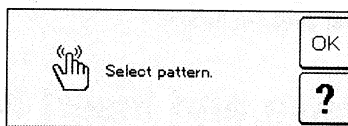
Bobbin winding shaft was left in winding position.



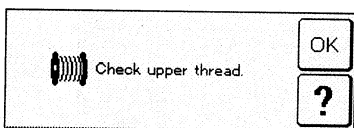
This appears when you have tried to press thread trimming button with presser foot raised.



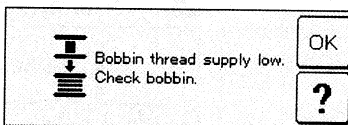
Lift presser foot lifter.



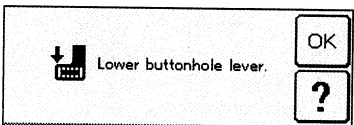
Select one of the patterns shown on screen.



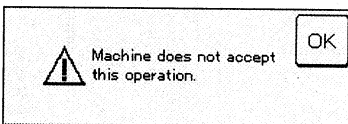
Upper thread has run out or broken. Thread is not in thread sensor guide.



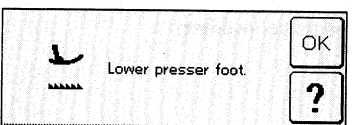
This appears when bobbin thread has run out during sewing.



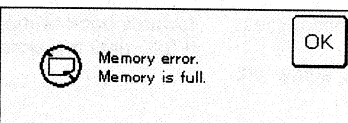
Buttonhole lever has not been pulled down.



This appears when you have pressed a key which is not effective.



In the case where you have tried to start embroidering with embroidery foot raised.



Memory error. Memory is full.

# Fabric, Thread And Needle Table



Your fabric will determine choice of needle and thread. The following table is a practical guide to needle and thread selection. Always refer to it before a new sewing project. And be sure to use same size and type of thread in bobbin as in top thread supply.

Fabric	Thread	Needles	
		TYPE	SIZE
Fabrics below can be of any fiber, cotton, linen, silk, wool, synthetic, rayon, blends. They are listed as examples of weight.		Failure to use a Singer brand needle may result in skipped stitches or poor sewing performance.	
Very Lightweight•Batiste, Chiffon, Organza, Voile. Also all microfiber or microdenier fabrics.	Cotton-wrapped polyester core (extra fine) Long fiber polyester (extra fine)	2020 red shank	9/70 or 11/80 orange band
Lightweight•Challis, Chambray, Charmeuse, Crepe de Chine, Gauze, Handkerchief Linen, Silk, Taffeta, Tissue faille.	Cotton-wrapped polyester core (all purpose) Long fiber polyester (two spun)	2020 red shank	11/80 orange band
Medium-weight•Broadcloth, Brocade, Chino, Chintz, Corduroy, Flannel, Linen, Poplin, Satin, Synthetic, Suedes, Taffeta, Terry, Velvet.	Cotton-wrapped polyester core (all purpose) Long fiber polyester (two spun)	2020 red shank	14/90 blue band
Medium to Heavy-weight•Coating, Damask, Denim, Drapery Fabric, Fake Fur, Gabardine, Ticking, Woolens.	Cotton-wrapped polyester core (all purpose) Long fiber polyester (two spun)	2020 red shank	16/100 purple band
Heavy-weight•Canvas, Duck, Sailcloth, Upholstery Fabric.	Cotton-wrapped polyester core (all purpose) Long fiber polyester (two spun)	2020 red shank	18/110
Leather		2032 leather	
Knits•Jersey, Tricot, Single Knit	Cotton-wrapped polyester core (all purpose) Long fiber polyester (two spun)	2045 yellow shank	11/80 orange band
Sweatshirt•Double Knit, Swimwear, Sweater Knit	Cotton-wrapped polyester core (all purpose) Long fiber polyester (two spun)	2045 yellow shank	14/90 blue band

\* Use with standard sewing thread in bobbin.



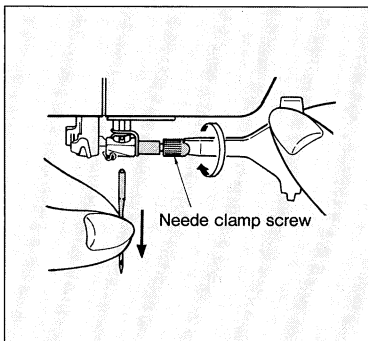
## CAUTION:

Make sure power/light switch is off before inserting needle.

## How to Remove and Insert Needle.

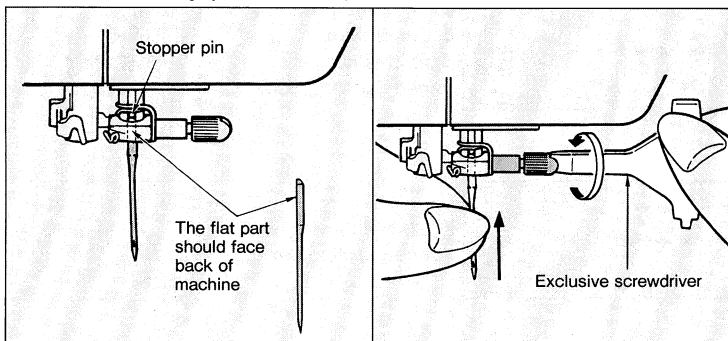


### 1 Removing needle.



- (1) Turn handwheel counterclockwise until the needle reaches highest position.
- (2) Loosen needle clamp screw with exclusive screwdriver.

### 2 Attaching needle (Needle cannot be inserted unless it is correctly positioned.)

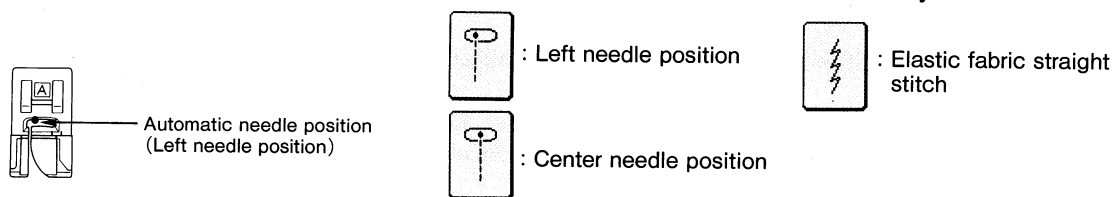


Hold needle with its flat part facing towards back of machine, and insert it fully until it touches stopper pin.

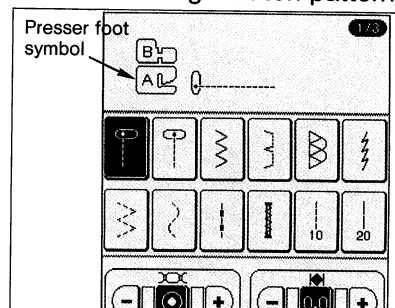
Securely tighten needle clamp screw, using exclusive screwdriver.

# Straight stitch

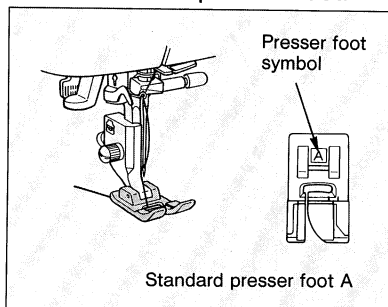
When you touch utility pattern button, left position straight stitch is automatically selected.



## 1 Select straight stitch pattern.

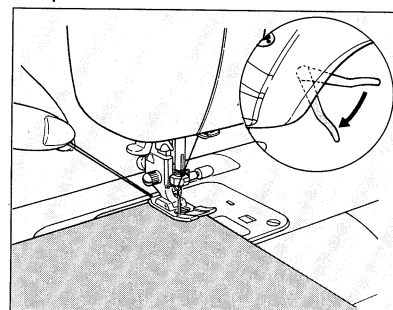


## 2 Use correct presser foot.



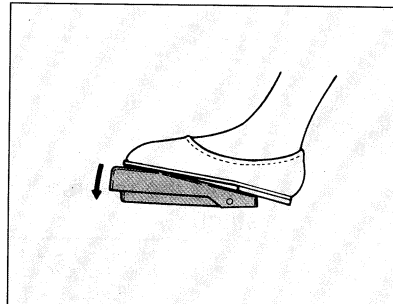
Use presser foot bearing symbol indicated on LCD.  
\*See page 12 for how to attach presser foot.

## 3 Position material, and lower presser foot.

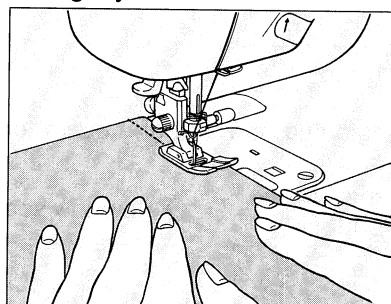


Place edge of material under presser foot.  
Pull upper and bobbin threads to rear of machine and lower presser foot.

## 4 Begin sewing.

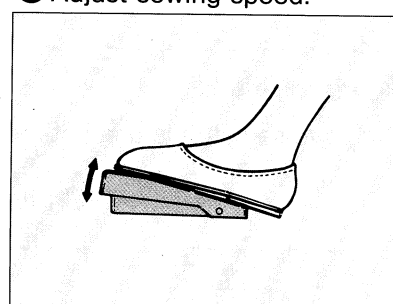


## 5 Lightly hold material.



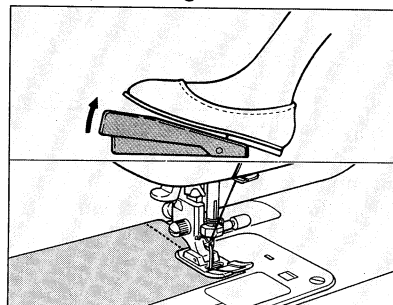
Be careful not to apply excessive pulling force to material while sewing.

## 6 Adjust sewing speed.

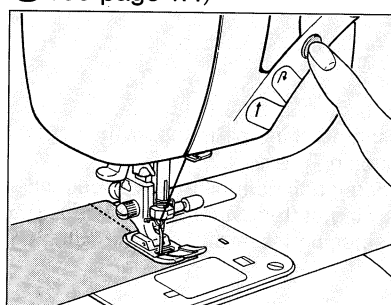


**Note:** The sewing speed lever may be used to limit the top speed.

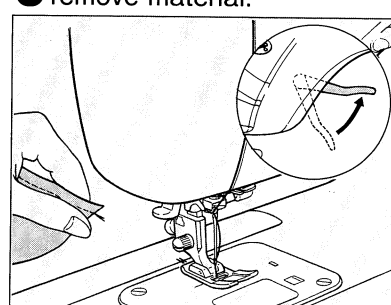
## 7 Stop sewing.



## 8 (For automatic thread cutter see page 17.)



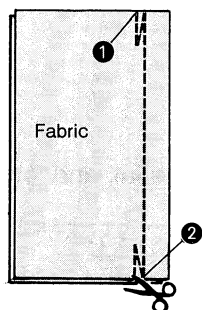
## 9 Lift presser foot and remove material.





# Automatic Backtack Sewing (Automatic reverse sewing)

Backtack function prevents thread from pulling out at beginning and end of sewing pattern, and cuts the thread at the end of the seam.

Example of backtack stitches when sewing straight stitch.



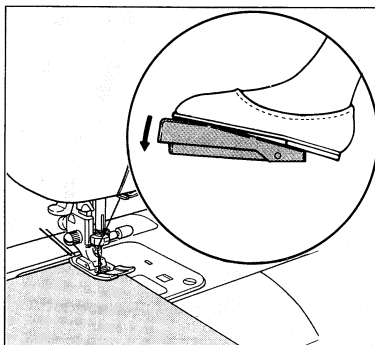
- Select pattern then press  button.  will appear on upper left side of LCD window.
- Automatic backtack will sew 3 stitches at the beginning and end of pattern, and cut thread.


## 3 methods to cancel Automatic Backtack mode.

1. Again press automatic backtack button.
2. Turn power to machine off then on.
3. Select any other pattern.

**NOTE:** To set automatic backtack and thread cutter to function with all patterns activate backtack function on option screen. (see page 11)

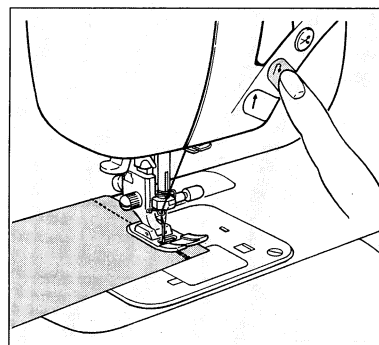
### ① At start of pattern.



Select pattern and press  button. Begin sewing, 3 backtack stitches will be sewn and pattern will automatically start from original position.

**Automatic backtack cannot be used for following patterns:**

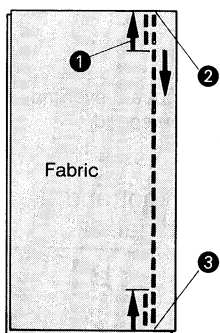
### ② At end of pattern.



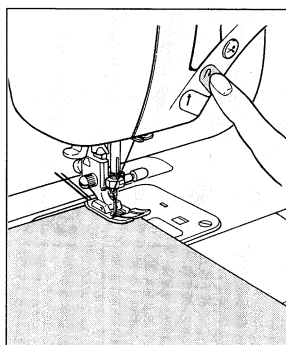
Press reverse button at prescribed ending position. 3 backtack stitches will be sewn and pattern will automatically stop at prescribed position and thread will automatically be cut.

## Reverse Stitch

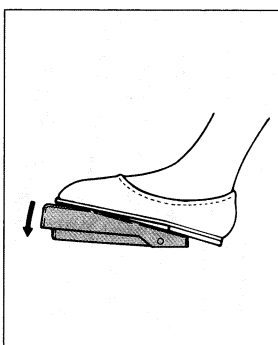
The reverse stitch is used at the beginning and end of a seam to secure it.



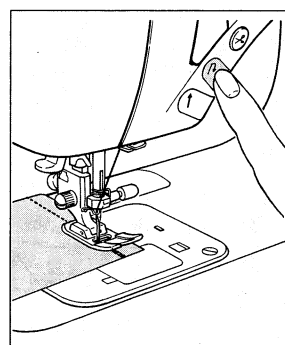
### ① Press the reverse stitch button.



### ② Sew the seam.

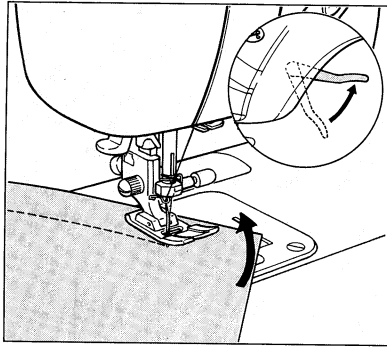


### ③ Press the reverse stitch.

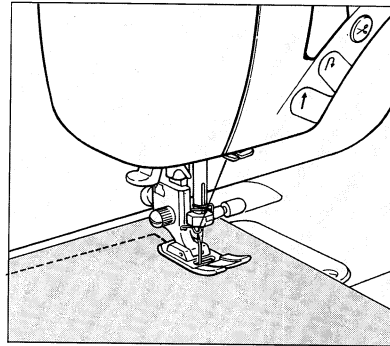


- The sewing machine performs reverse stitching only while the reverse stitch button is being pressed.
- The sewing machine runs at low speed when sewing in reverse.
- When sewing pattern stitches such as zigzag stitch, the machine will perform tacking stitching instead of reverse stitching.

## Changing Sewing Direction/Pivoting

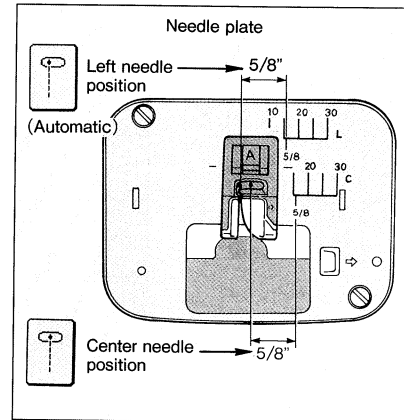


Stop machine in desired position. Lower needle into fabric. Lift presser foot, and turn material in desired sewing direction.

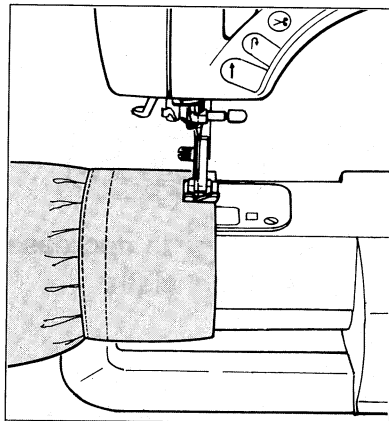


Lower presser foot and start sewing.

## Seam Guides



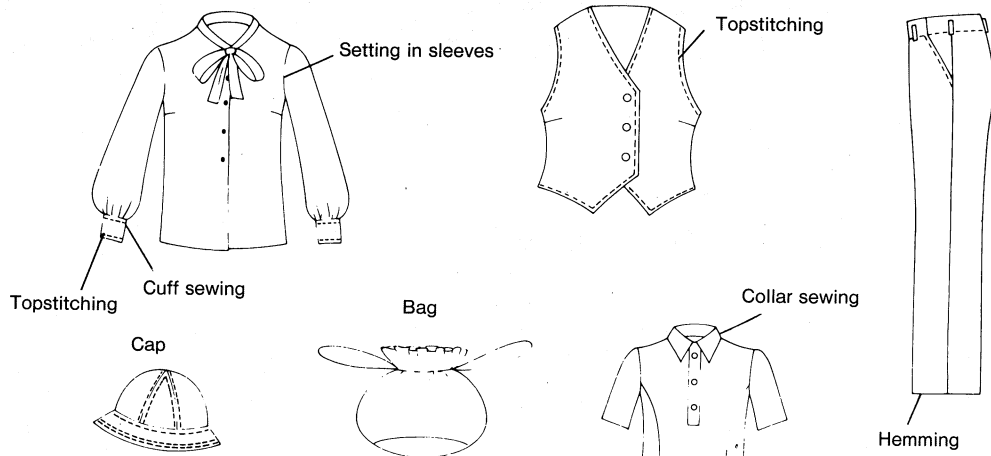
## Free Arm Sewing



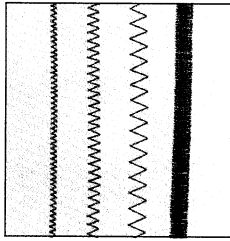
Sewing hard-to-reach garment areas is made easier by using free-arm sewing capability of sewing machine.

**Note:** See page 7 for converting machine to free-arm.

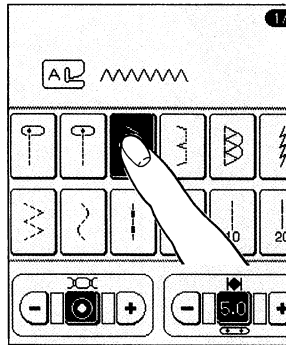
## Application examples



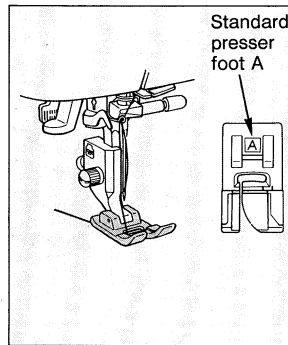
## Zigzag Stitch



**1** Select zigzag stitch pattern.



**2** Use correct presser foot.

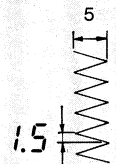


**3**

The sewing method is the same as for straight stitch steps 3 through 9. (see page 29)

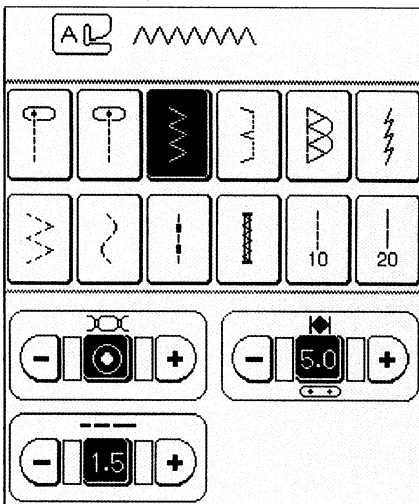
**4**

**NOTE:** Automatic stitch width and stitch length.



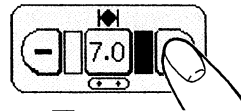
Use presser foot bearing symbol indicated on LCD.

## How to adjust stitch width.

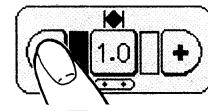


After selecting zigzag stitch pattern, if desired, adjust stitch width by pressing stitch width buttons. Select from among 22 different stitch width possibilities.

**NOTE:** Stitch width can only be adjusted when sewing machine is stopped.



Press **+** to increase stitch width.

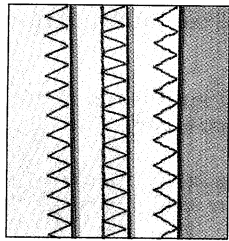


Press **-** to decrease the stitch width.

## Manually Adjusted Stitch Width vs. Stitch Length

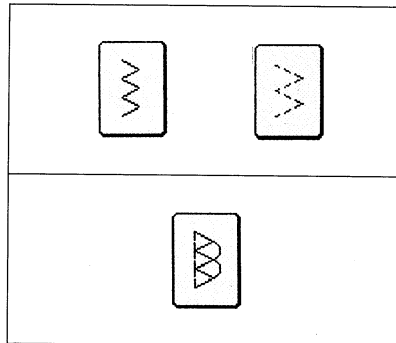
Indication of LCD	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  0.0         </div> <div style="text-align: center;">  0.3         </div> <div style="text-align: center;">  0.6         </div> <div style="text-align: center;">  1.0         </div> <div style="text-align: center;">  5.0         </div> <div style="text-align: center;">  7.0         </div> </div> <p style="text-align: center;">Automatic stitch width</p>					
Stitch width	0	0.3	0.6	1	5	7
Stitch length	1.5	1.5	1.5	1.5	1.5	1.5
Manually adjusted stitch length	 0.2~4.0			 0.2~4.0		 0.2~4.0

# Overcasting (Overedging)



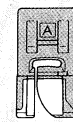
Used to prevent fabric from fraying.

**1** Select desired stitch pattern.



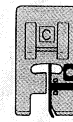
There are three stitch types that can be used for overcasting.  
Select the one that is best suited for material.

**2** Use correct presser foot.



Standard presser foot A

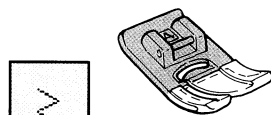
- Be sure to use the standard presser foot for zigzag and multi-stitch zigzag sewing.



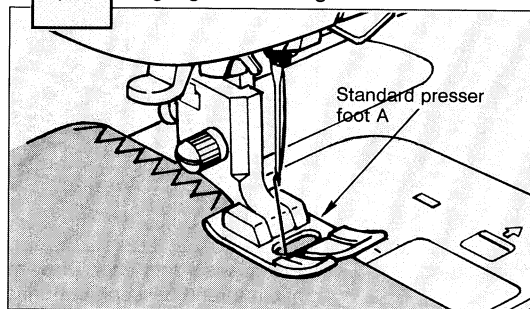
Overcasting foot C

- Overlock/overcasting

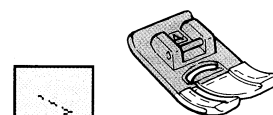
Use presser foot which is indicated on LCD.



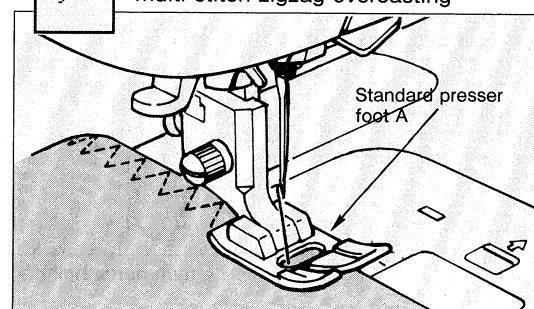
Zigzag overcasting



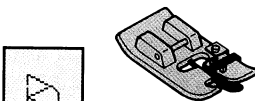
Used for overcasting light-weight material with curly edges.



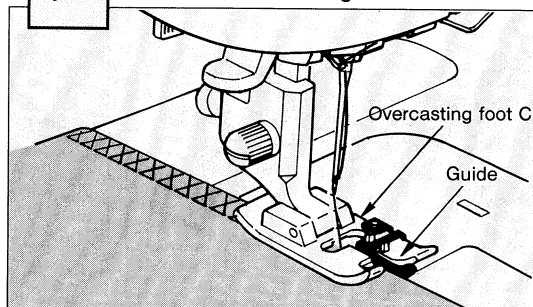
Multi-stitch zigzag overcasting



Used for stretchy material or fabrics which tend to fray.

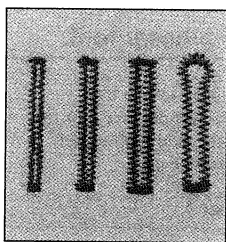


Overlock/overcasting



Used for overcasting edge of fabric to prevent fraying.  
This stitch may also be used to sew a seam that will not be pressed open.

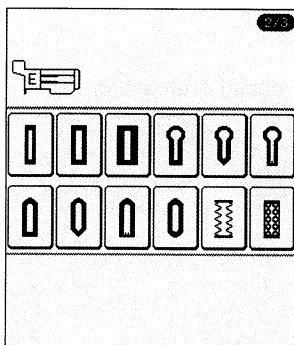
# Automatic Buttonholes



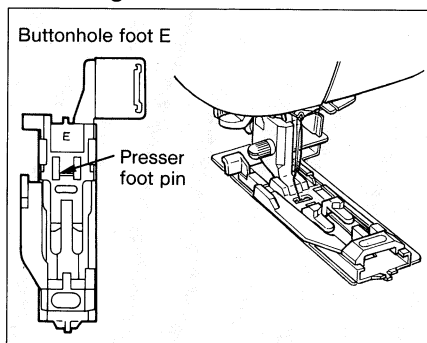
- When sewing knit or other stretchy materials, apply interfacing to the material, and set presser foot pressure adjustment lever to "LOW".
- Be sure to sew a test buttonhole first.
- Automatic stitch length (density) is 0.5 for bartack buttonholes and 0.6 for keyhole buttonhole. Adjust buttonhole density by adjusting stitch length (see page 20).
- Automatic buttonholes foot has an underplate for sewing perfect buttonholes along edge of garments where fabric layers are not equal. Underplate may be removed for special applications such as a double-breasted coat.

- For sewing small buttonholes on light weight fabric.
- For sewing small buttonholes on light to medium weight fabric.
- For sewing large buttonholes on medium to heavy weight fabric.
- For sewing large buttonholes in thick or heavy weight fabrics.
- For sewing small buttonholes on light to medium weight fabric.
- For sewing small buttonholes in shirts, blouses, etc.

## 1 Select desired style and size buttonhole.

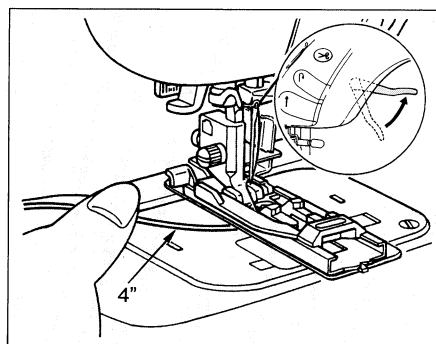


## 2 Change foot.



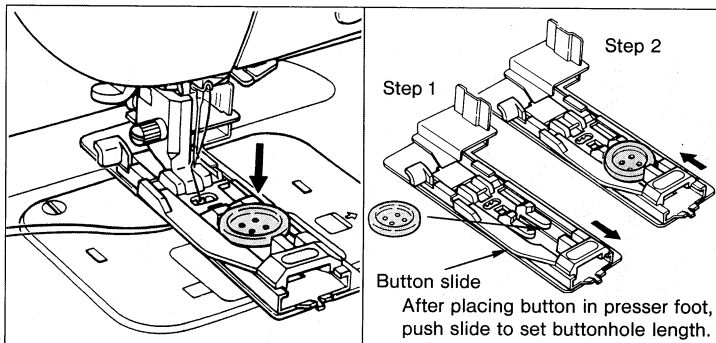
Attach buttonhole foot as illustrated.

## 3 Position Needle and Bobbin threads.

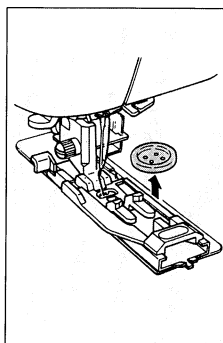


Raise presser foot lifter. Draw needle and bobbin thread between buttonhole foot and underplate.

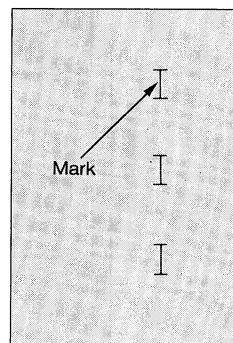
## 4 Place button in buttonhole foot.



## 5 Remove button.




## 6 Mark Buttonhole Positions.





**Note:** When sewing buttonholes be sure to support the weight of the garment.





## Automatic buttonhole steps


 For sewing large buttonholes on medium to heavy weight fabric.

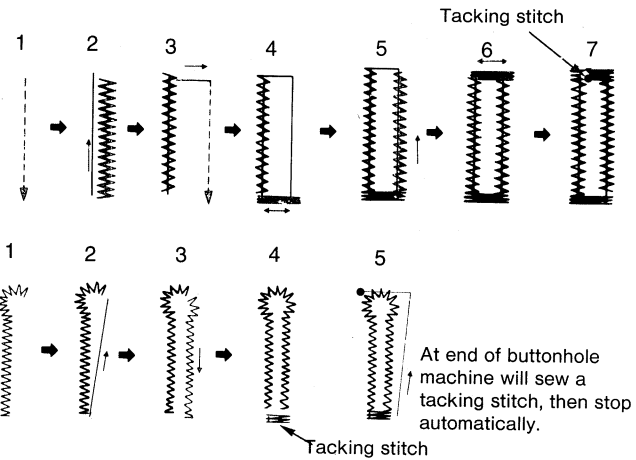
 For sewing large buttonholes in thick or heavy weight fabrics.

 For sewing small buttonholes on light to medium weight fabric.

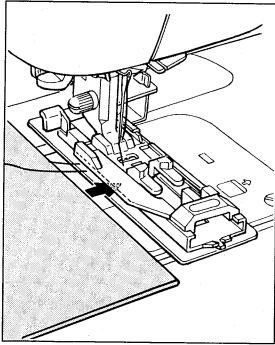
 For sewing large buttonholes in thick or heavy weight fabrics.

 For stretch fabrics such as cotton jersey.

 For knit fabrics such as double knit.

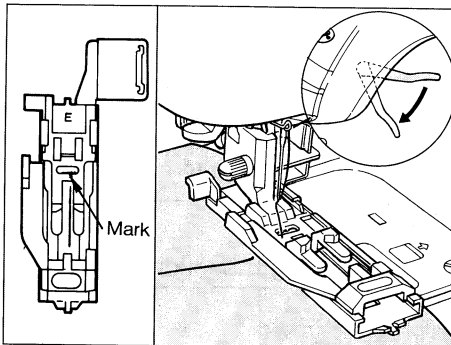


### 7 Position material.



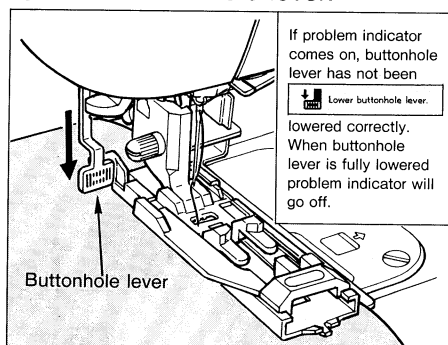
Place material between foot and underplate.

### 8 Lower buttonhole foot.



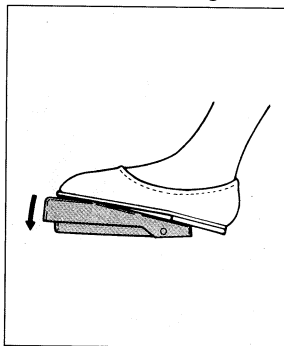
Lower buttonhole foot so that mark is at center of needle hole in foot.

### 9 Lower buttonhole lever.

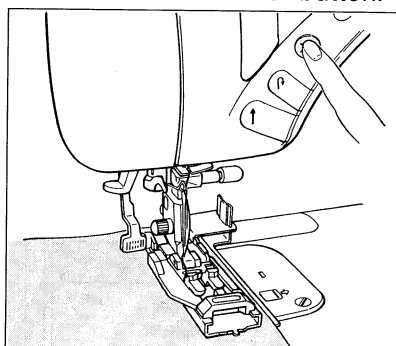


- Attempting to sew without lowering the buttonhole lever, will cause problem indicator to flash on and off, and machine will not start.
- If buttonhole length is set wrong, or needle or bobbin thread runs out, restart buttonhole from beginning by pressing buttonhole stitch pattern selection button once.

### 10 Begin sewing.

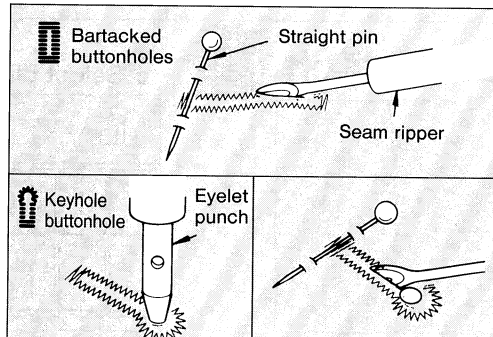


### 11 Press thread cutter button.




When buttonhole is complete cut threads.

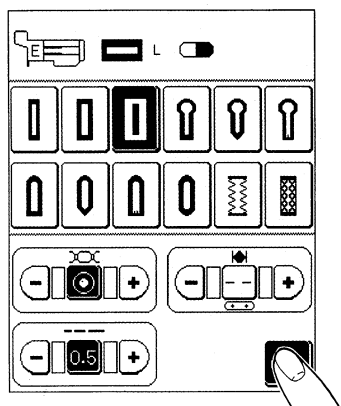
### 12 Open completed buttonhole, using seam ripper.



Cut middle of buttonhole open using seam ripper, being careful not to cut threads. It is advisable to place a straight pin at end of buttonhole to help prevent overcutting. Use eyelet punch to cut out round portion of keyhole buttonhole. It is advisable to place fabric on old piece of wood.

## Purl Stitch Buttonholes

The bartack buttonholes and the keyhole buttonhole can be used for purl stitch effect. Select desired buttonhole and press 2-color key .

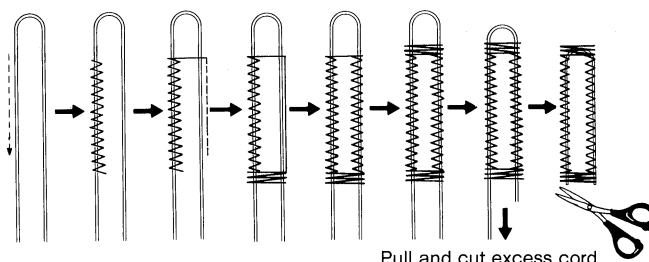
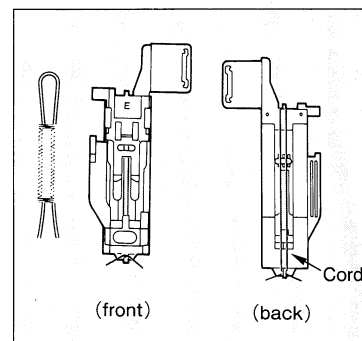


- The bobbin thread creates a crest on top of fabric.
- Finished appearance resembles a hand sewn buttonhole.

## Sewing Corded Buttonholes

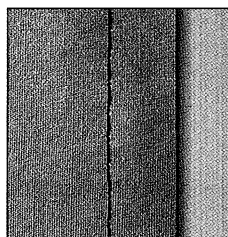
Sewing a cord into buttonholes will prevent them from becoming loose and they will last longer. Buttonhole twist thread may be used for cording.

### How to set the cord.



To sew buttonholes with cording, pass cord around end of buttonhole foot and knot ends of threads at front. Then, attach buttonhole foot to presser bar and sew buttonhole. Pull cording tight into sewn buttonhole and cut off excess cord.

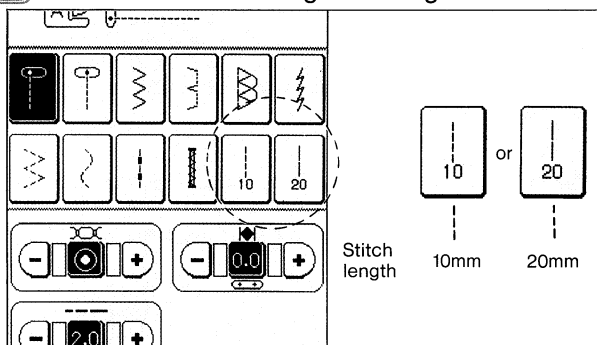
## Basting Stitch



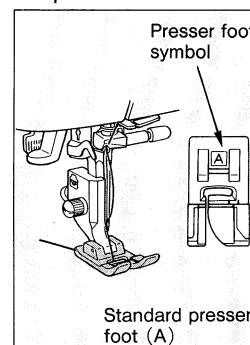
Basting stitch seam can be easily removed.



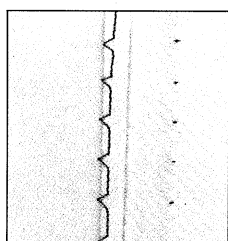
**1** Select desired length basting stitch.



**2** Use correct presser foot.



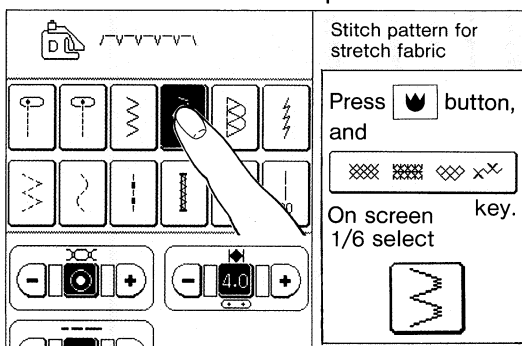
## Blindstitch



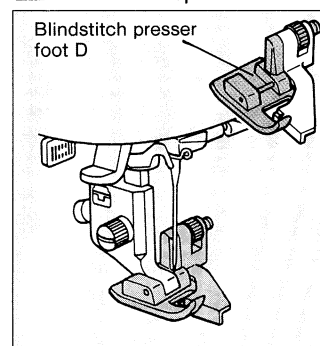
Blind stitching provides a durable way to finish a hem. It takes practice, however, so a test sample is suggested.



**1** Select blindhem stitch pattern.



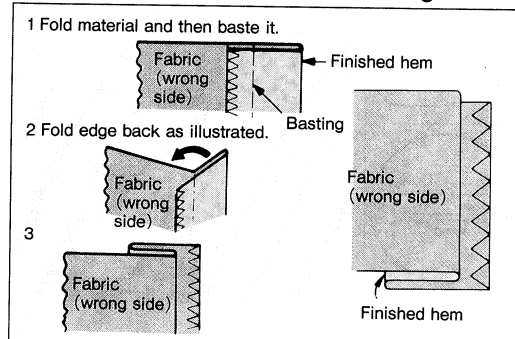
**2** Use correct presser foot.



Use presser foot which has symbol indicated on LCD.

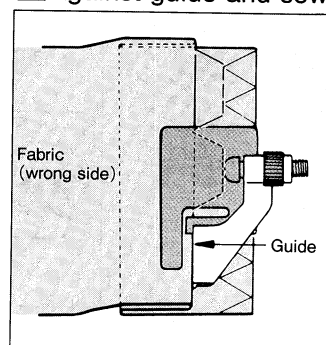
## For blindstitching general fabrics or heavy-weight materials

### 1 Overcast material, and fold edge.

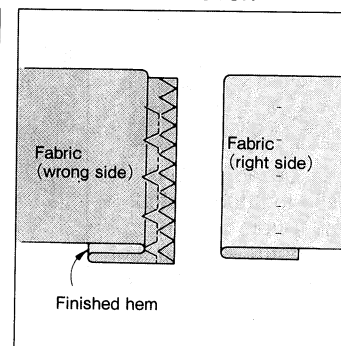


- Refer to page 32 for overcasting.
- Refer to page 35 for basting stitch.

### 2 Position folded edge against guide and sew.

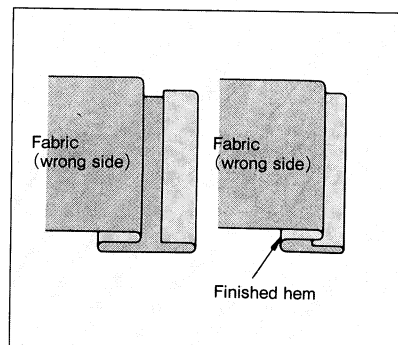


### 3 Turn fabric over.

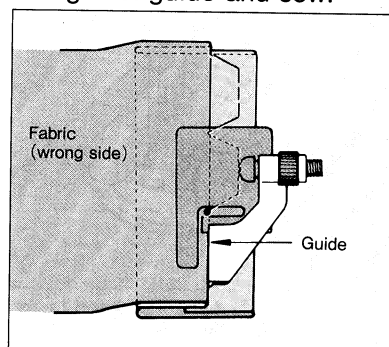


## For blindstitching light-weight fabrics

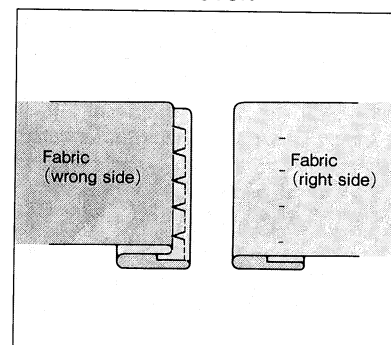
### 1 Fold the fabrics.



### 2 Position folded edge against guide and sew.

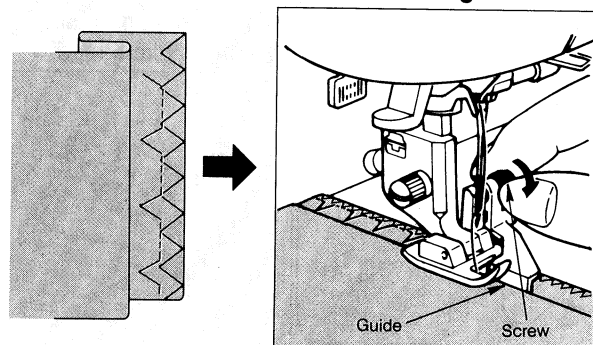


### 3 Turn fabric over.



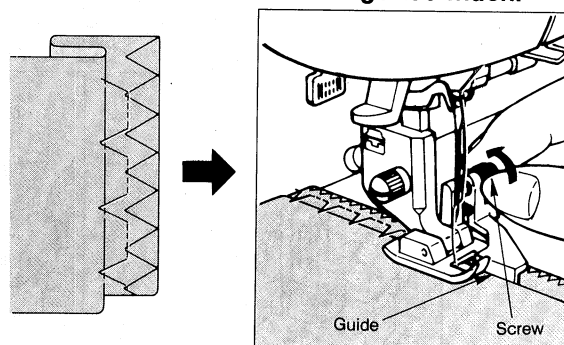
## How to adjust guide of blindstitching presser foot

### • If stitches fail to reach folded edge:



Turn screw counter clockwise.  
This will move guide to right.  
Place folded edge snugly  
against repositioned guide.

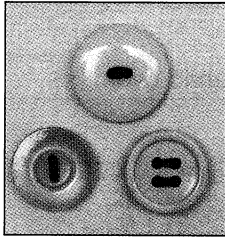
### • If stitches cover folded edge too much:



Turn screw clockwise.  
This will move guide to left.  
Place folded edge snugly  
against repositioned guide.

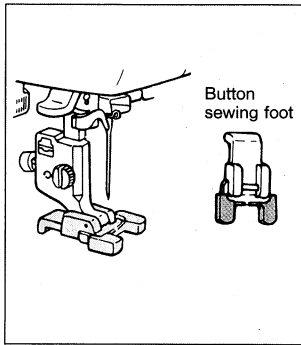
\* You also may adjust stitch width to achieve a perfect blindstitch.

# Attaching Buttons



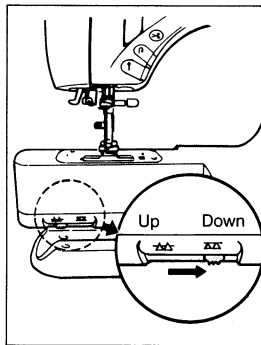
The Zigzag stitch is used to attach both 2 and 4-hole buttons. The button-sewing foot must be attached when sewing a button.

**1** Use correct presser foot.

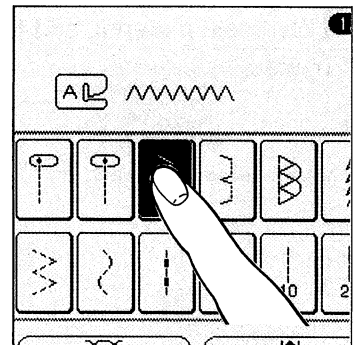


Attach button-sewing foot supplied in accessory bag.

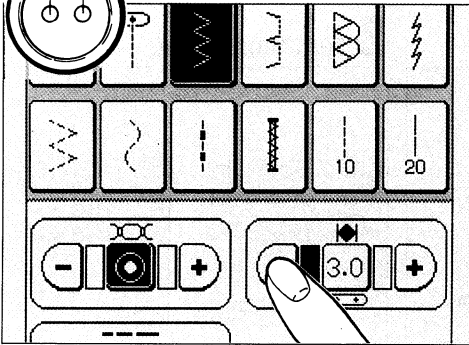
**2** Lower feed dogs.



**3** Select zigzag stitch pattern.

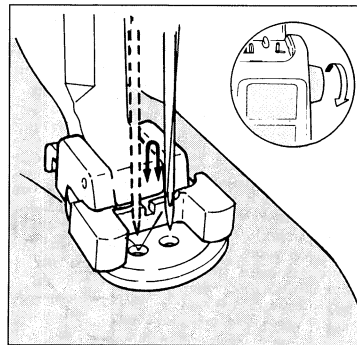


**4** Measure distance between holes in button to be sewn.



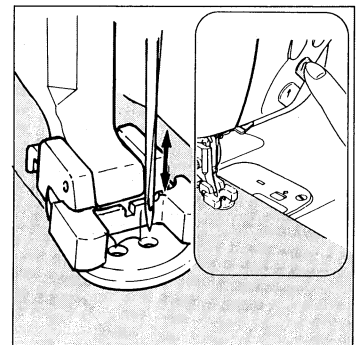
Press stitch width buttons to match holes in button to be sewn.  
**NOTE:** 3.0mm width will generally sew all size buttons.

**5** Place fabric on machine, and place button under button sewing foot.



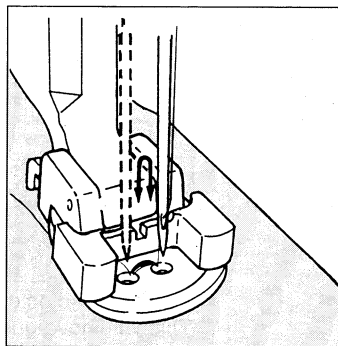
Turn handwheel by hand to confirm that needle exactly enters holes in button.

**6** Tack thread in place.

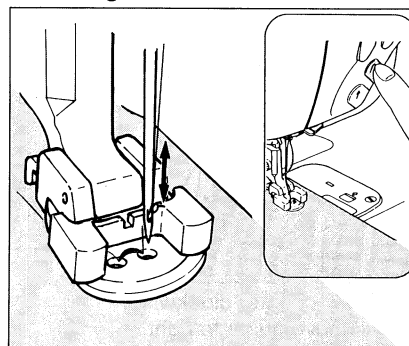


Press reverse button to sew 5 tacking stitches to secure.

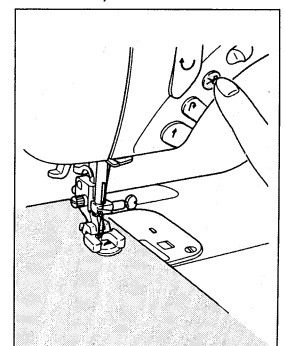
**7** Slowly press on speed controller allowing needle to sew 8 to 10 stitches.



**8** Press reverse button to sew 5 tacking stitches to secure.

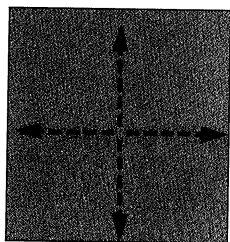


**9** Press thread cutting button, trim thread.



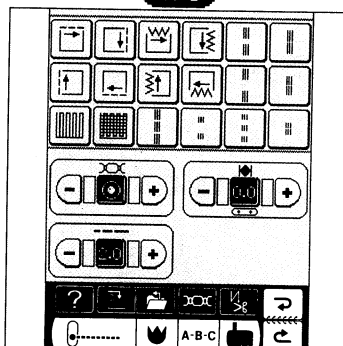
**Caution:** Due to irregular shape of some buttons button foot may not clamp securely. Do not attempt to sew these or buttons with a shank using sewing machine.

## Four Direction Sewing

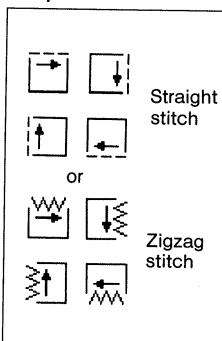


These four stitches allow sewing sideways (Zigzag/Straight stitch) and forward or backward, without pivoting the fabric.

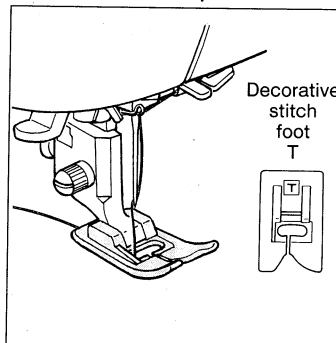
**1** Select Utility Screen **3/3**



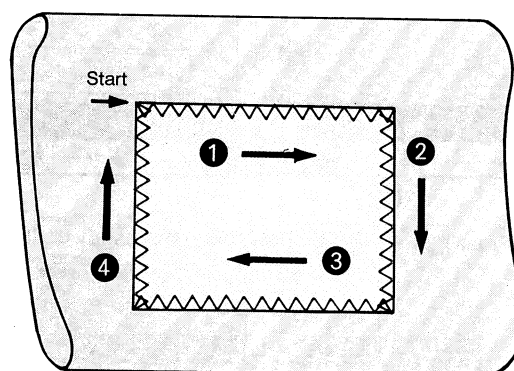
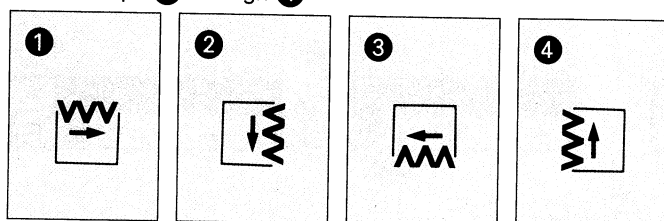
**2** Select desired pattern.



**3** Use correct presser foot.

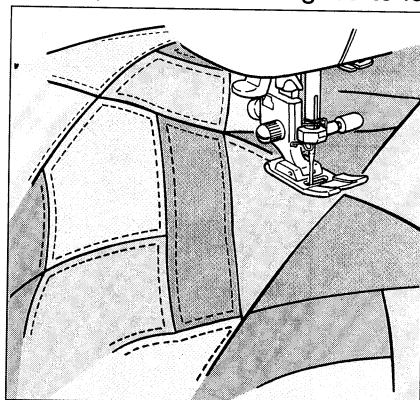


Follow steps **1** through **4**

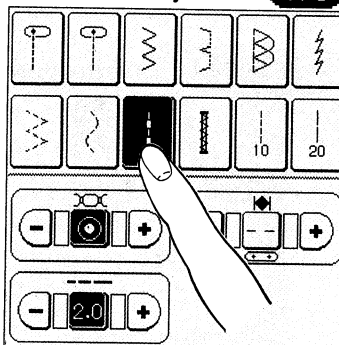


## Decorative Topstitching

There are 9 unique stitch patterns which are perfect for decorative topstitching and quilting. These patterns are designed to look like hand sewing.

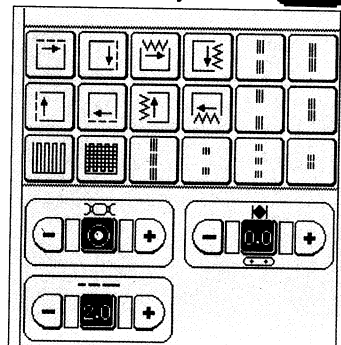


**1** Select Utility screen **1/3**

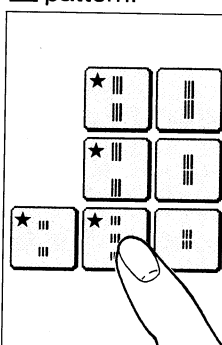


2. Select Running Stitch Pattern.
3. Thread bobbin with desired topstitching color.
4. Thread machine with invisible or light weight thread which matches fabric and will not show.
5. Adjust stitch length if desired.
6. Sew.

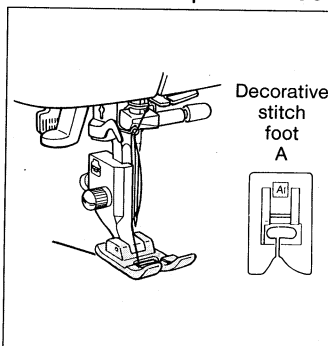
**1** Select Utility screen **3/3**



**2** Select desired pattern.




**3** Use correct presser foot.

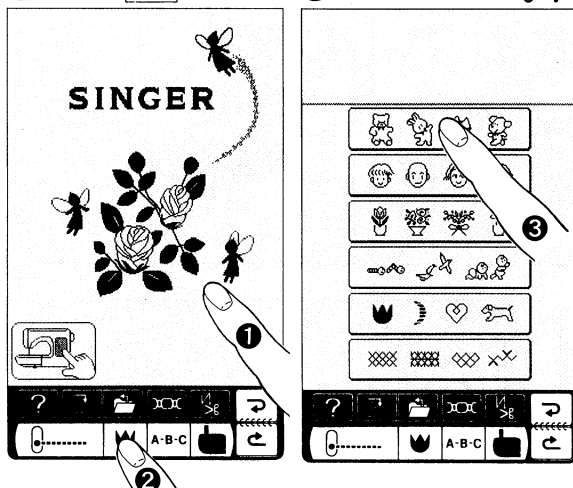


**NOTE:** Patterns indicated by ★ have a connecting stitch between the bold topstitching. After sewing, trim connecting stitches.


# Pattern Sewing How to view pattern touch-screens.

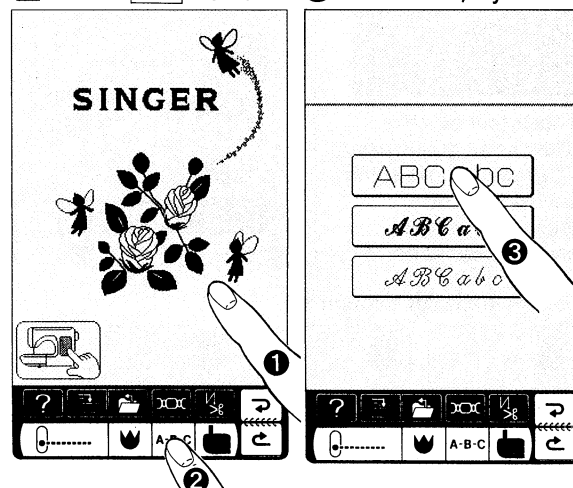
## Pattern category



- 1 Touch Welcome Screen.
- 2 Press  button.
- 3 Select Pattern Category.

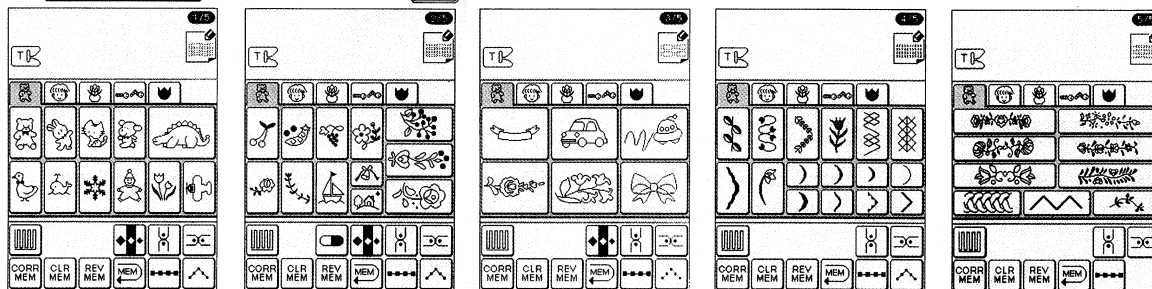


## Alphabet

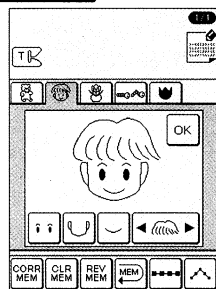
- 1 Touch Welcome Screen.
- 2 Press  button.
- 3 Select Font/style.




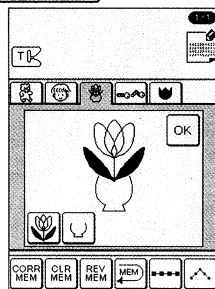
Press  key, and next page  button. 5 Touch-screens.




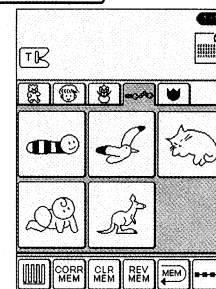
 1 Touch-screen



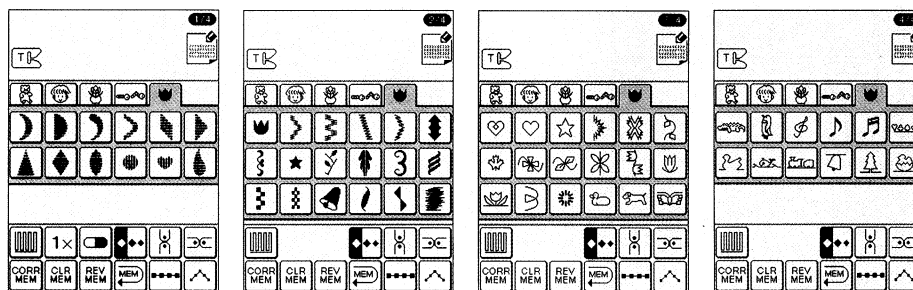
 1 Touch-screen

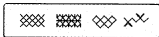


 1 Touch-screen

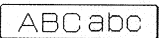
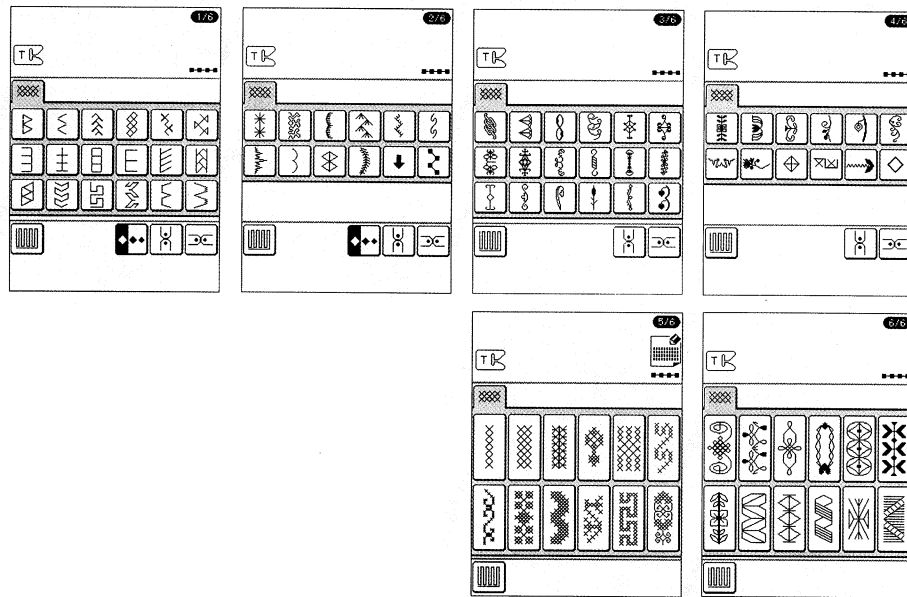


 4 Touch-screens

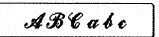
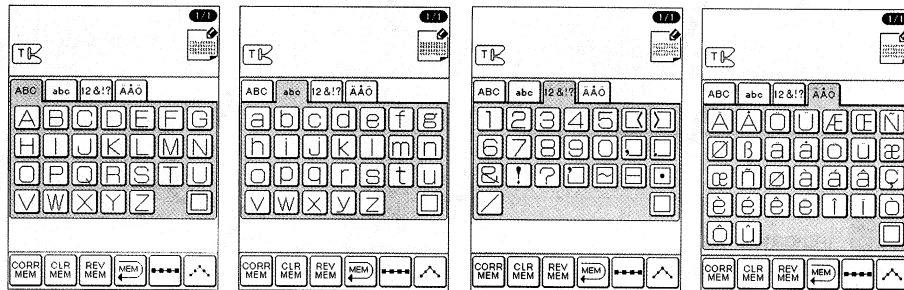




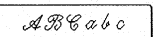
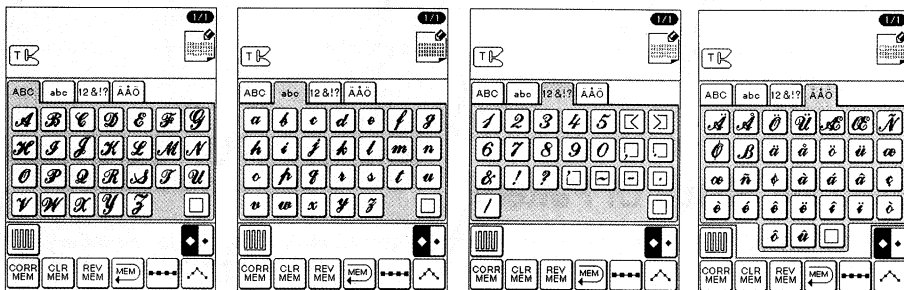
## 6 Touch-screens



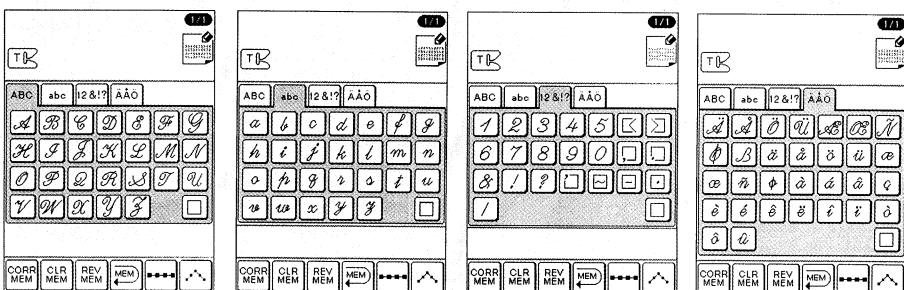
## 4 Touch-screens



## 4 Touch-screens

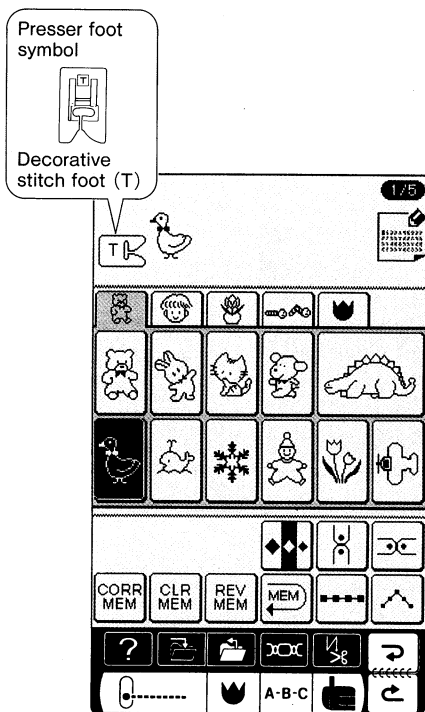


## 4 Touch-screens





Touch desired pattern on LCD Touch-screen.  
Selected pattern will appear on top of LCD screen.



Indicates memory capacity remaining.

When selecting patterns or letters, they are automatically memorized in the sewing machines working memory. Each time a pattern is selected and memorized, a block darkens. Light half-tone blocks indicate remaining memory. (MAX 40)

## Pattern Modifier Keys★

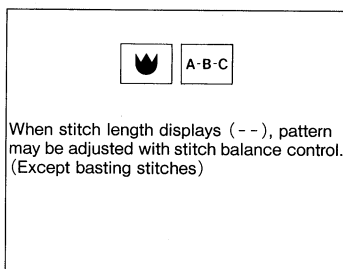
Names of each key	Enlarge size key	Reduce size key
Pattern stitch (Example)		
LCD graphics		
Names of each key	Mirror (reversed image) key	Return key
Pattern stitch (Example)		
LCD graphics		Needle will return to sewing start point of memory patterns.

## Balancing Shape Of Pattern

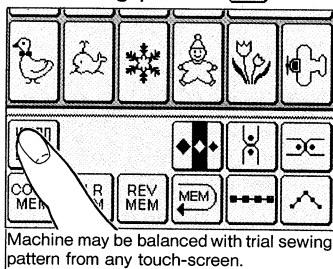
It is recommended that a test sample of pattern be sewn using same fabric and interfacing or backing before sewing on garment. Depending on type of material, its finish, thickness and interfacing used, shape of pattern may be altered. If pattern is out of shape sew trial sewing pattern to balance machine.

**NOTE:** Trial sewing Pattern will not appear if any patterns have been selected or any patterns are in memory.

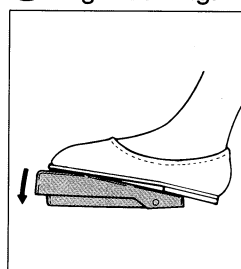
**1** Press pattern category button.



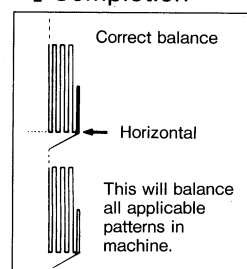
**2** Press trial sewing pattern .







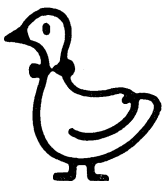
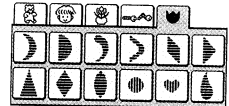
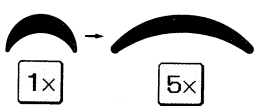

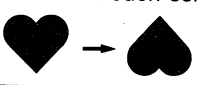










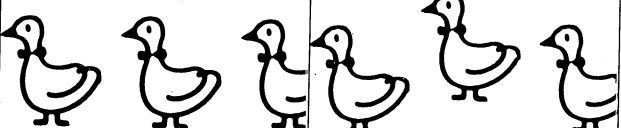
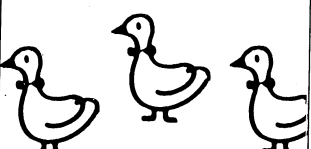

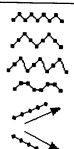
**3** Begin sewing.




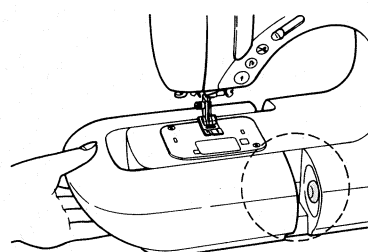
**4** Completion





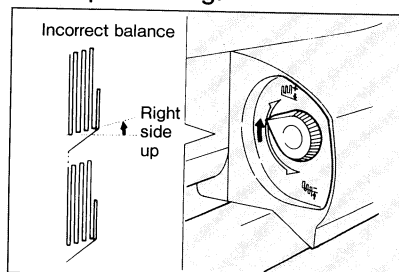
 Regular size key	 Pattern elongate key	 2-color or purl stitch buttonhole key	 Turn over key	
	 Applicable 1 Touch-screen 	 Applicable 4 Touch-screen 		
		The 2-color or purl stitch modifier only shows on applicable stitch pattern screens. 	 	
 Repeat pattern key	 Pattern position key	 Correction key	 Pattern clear key	 Review key
		Corrects undesired pattern in middle of memory sequence.	(clears pattern that has been memorized.)	Reviews patterns in memory one by one.
Continuous pattern sewing 	 Each press of position key will indicate a different pattern layout.			

**NOTE:** When sewing filled satin patterns from file  screen 1/4 the 2-color key is invalid with combination (memory) patterns, continuous patterns or position patterns. Also, it is mandatory that elongate, turnover or mirror functions are selected prior to selecting 2-color.



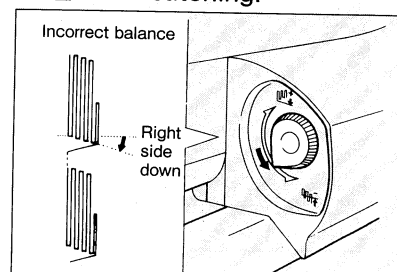
Remove auxiliary bed

#### 4-1 How to adjust right side up stitching.



Turn stitch balance control up.

#### 4-2 How to adjust right side down stitching.



Turn stitch balance control down.

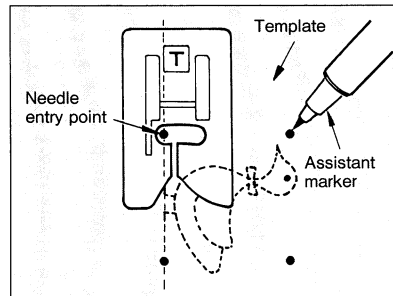
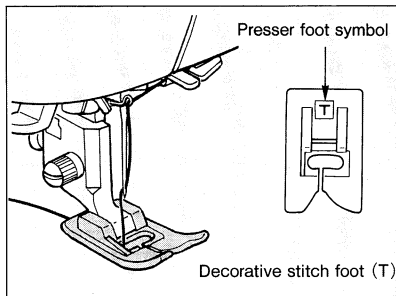
# Large Size Pattern Sewing

It is recommended to make a sample using same fabric and interfacing or backing material before sewing on garment.  
**NOTE:** Virtually all fabrics require interfacing to sew large size patterns properly.

When sewing pattern stitches or alphabet stitches, be sure to use decorative stitch foot (T).

To determine pattern placement use assistant marker and templates provided with machine.

It is vital fabric is kept square to machine to assure proper pattern formation.



Position fabric under decorative stitch foot (T) where needle will begin sewing pattern.

Patterns are stitched sideways, this allows for easier sewing with free-arm.

**NOTE:** See template for additional instructions.

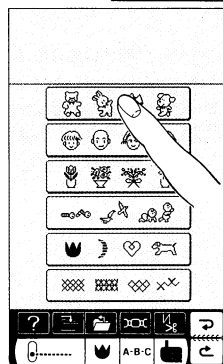
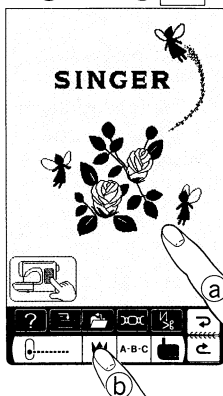
## How to select large size pattern touch-screens.

Press large motif category button.....

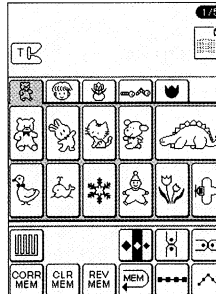
To scroll through the 5 pattern touch-screens press next page button.

1 Press screen, (a) then (b).

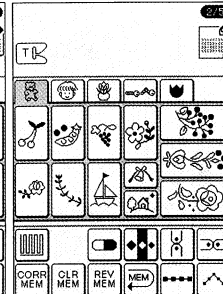
2 Press key.



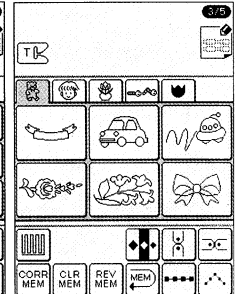
Touch-screen 1.



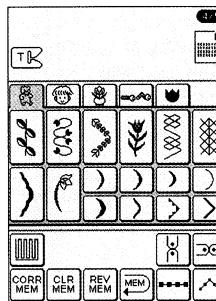
Touch-screen 2.



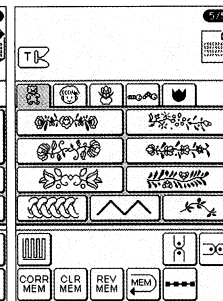
Touch-screen 3.



Touch-screen 4.



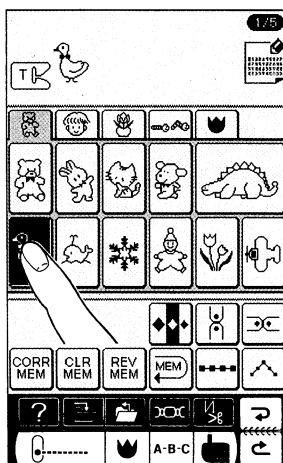
Touch-screen 5.



To return to previous touch-screen press previous page button.

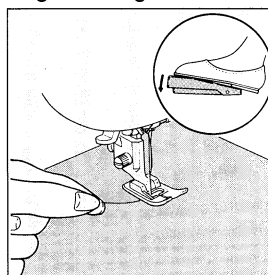
## How to select a pattern.

Touch desired pattern on LCD Touch-screen. Pattern will appear on top of LCD window.

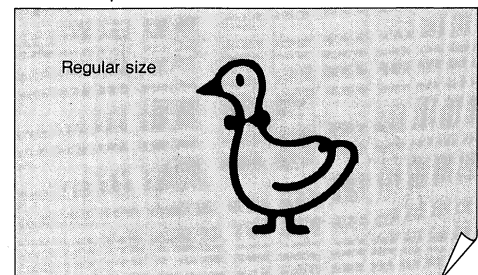


## 1. Single pattern

Begin sewing.




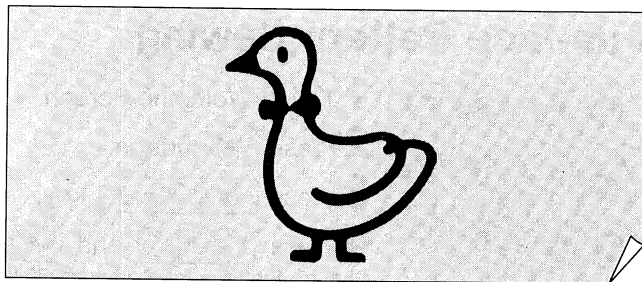
For example




When one pattern is complete machine will stop automatically.

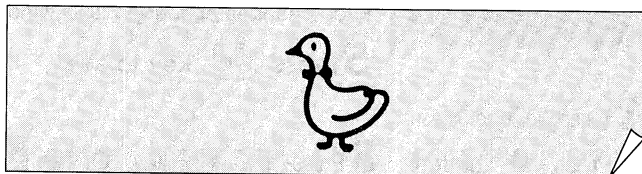
## 2. Enlarge pattern

1. Select pattern.
2. Press enlarge size key .
3. Begin sewing.




## 3. Reduce pattern

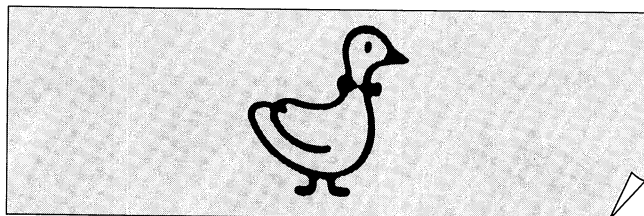
1. Select pattern.
2. Press reduce size key .
3. Begin sewing.




## 4. Mirror pattern

1. Select pattern.
2. Press mirror key .
3. Begin sewing.


\* Pattern can also be enlarged or reduced.



## 5. 2-color pattern

The 12 large patterns on touch-screen  can be sewn in two colors. This unique technique is achieved by placing a different color thread in bobbin than needle thread. Bobbin thread color is sewn on right side of fabric, thereby sewing pattern in two different colors.

On machine as shown on inside of top cover grey area of pattern will be sewn with bobbin thread.


\* Press 2-color pattern key .



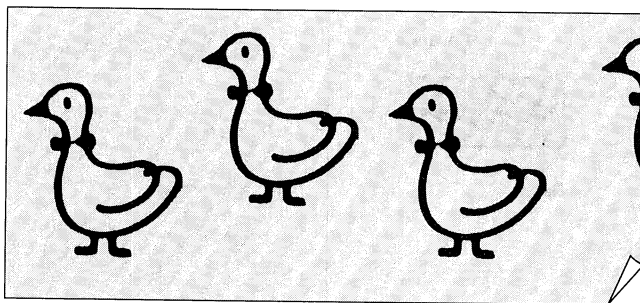
Examples of 2-color patterns

## 6. Position pattern


In position pattern mode, machine is capable of changing position of each pattern.

1. Select pattern.
2. Press position key . Continue to press position key to select from among 6 different positions as shown on top of LCD window.
3. Begin sewing.
4. Machine will continue to sew pattern until machine is stopped.

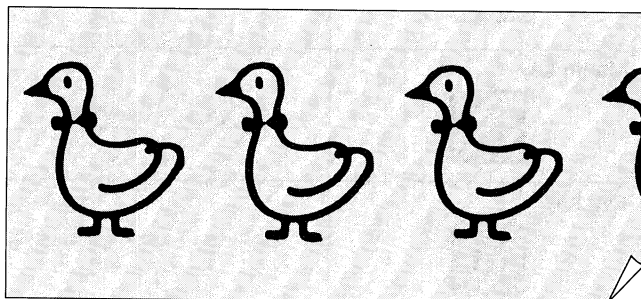
**NOTE:** This is a repeat function and cannot be entered into memory.



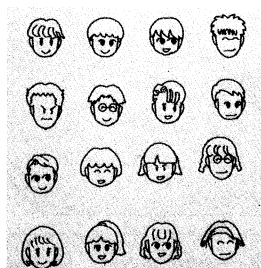
## 7. Repeat pattern

1. Select pattern.
2. Press repeat key .
3. Begin sewing.
4. Machine will continue to sew the pattern until machine is stopped.

**NOTE:** To finish sewing to the end of pattern, press repeat key again. Machine will stop sewing at end of pattern.



# Fun-face Pattern Sewing



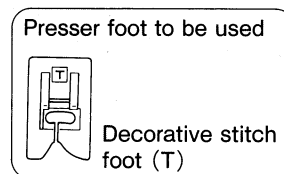
**1** Touch Welcome Screen.

**2** Press button.

**3** Press key.

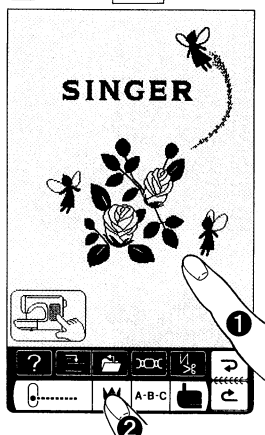
**4** Press and key.  
Change features from among 2304 possible faces.  
Face changes appear on LCD window.

**5** Press key to sew.

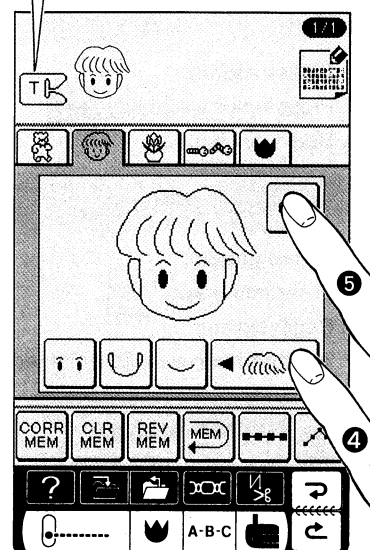
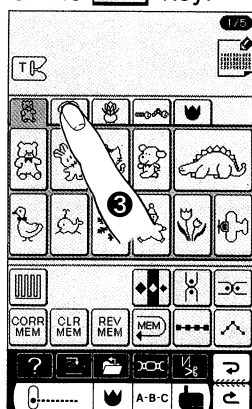
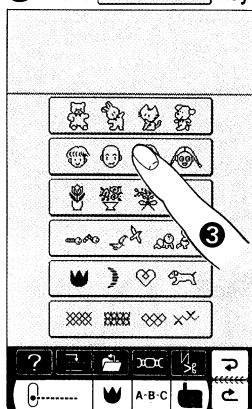


**1** Touch Welcome Screen.

**2** Press button.
















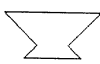

**3** Press key. Or file key.

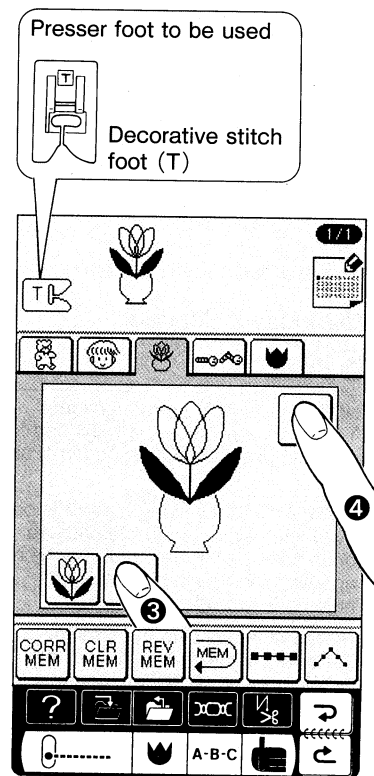


Names of each key	Kinds
<b>Hair key</b> 	
<b>Chin key</b> 	
<b>Mouth key</b> 	
<b>Eye key</b> 	


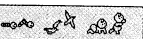
## Fun-flower Pattern Sewing


- 1 Press  button.
- 2 Press  key.
- 3 Press  and  key.
- 4 Press  key to sew.

Names of each key	Kinds
Flower key 	    
Vase key 	  



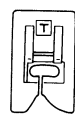
## Animated Pattern Sewing

- 1 Press  button.
- 2 Press  key.
- 3 Press desired pattern.

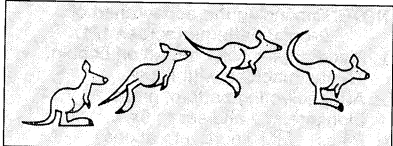
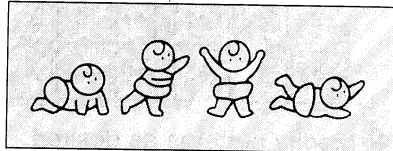
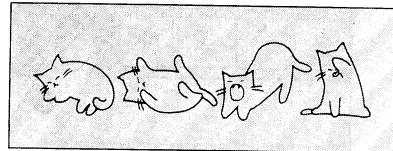
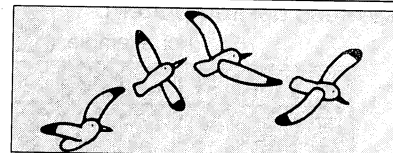
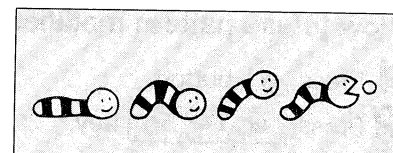
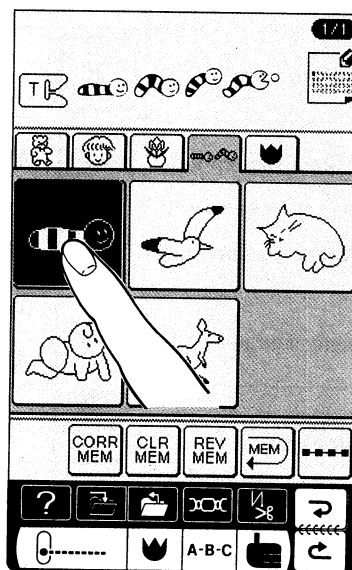
\*To repeat pattern sequence  
Press continuous pattern  
sewing Key .

**NOTE:** DO NOT PRESS TOO  
HARD ON TOUCH-SCREEN.....  
A LIGHT TOUCH IS ALL THAT  
IS REQUIRED.

Presser foot to be used



Decorative stitch  
foot (T)



# Single Regular Pattern Sewing

- 1 Press button.
- 2 Press key.
- 3 To view all screens press next page button.
- 4 Select desired pattern.
- 5 Modify if desired.
- 6 Sew

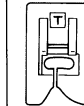
**NOTE:** All regular patterns except Touch-screen 1 must be balanced for perfect appearance. (see pages 41 and 42)

**NOTE:** The trial sewing pattern is only available before any patterns have been selected. If trial pattern does not appear, clear working memory by holding finger on key.

**NOTE:** When sewing filled satin patterns on Touch-screen 1/4 the 2-color key is invalid with combination (memory) patterns, continuous patterns or position patterns. Also, it is mandatory that elongate, turn-over or mirror functions are selected prior to selecting 2-color.

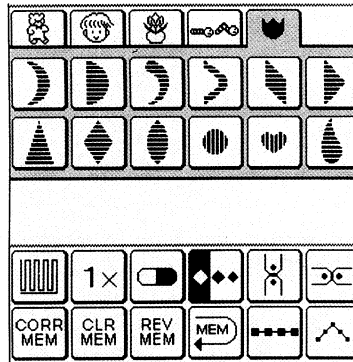
**NOTE:** The Pattern position key is invalid with combination (memory) patterns or continuous patterns. To use positioning feature first press desired pattern, then other desired modifiers, then press pattern position key.

Presser foot to be used

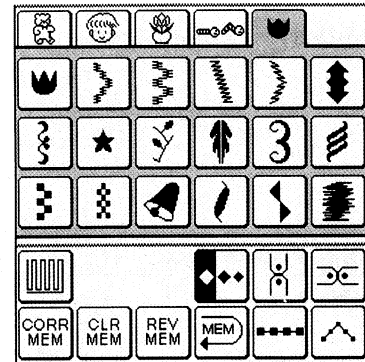


Decorative stitch foot (T)

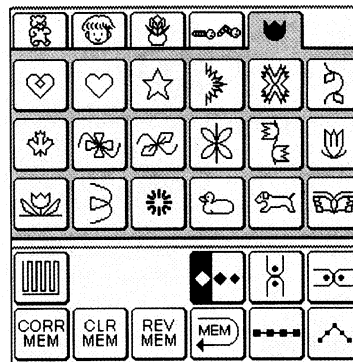
Touch-screen 1.



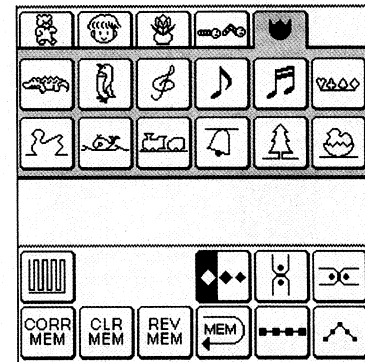
Touch-screen 2.



Touch-screen 3.



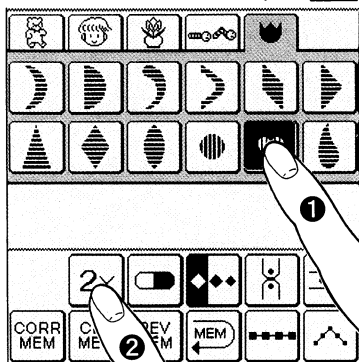
Touch-screen 4.



## How to use pattern modifier keys of regular patterns.

- 1 Press button.
- 2 Press key.
- 3 Press desired pattern.

For example:



- 4 Modify patterns as desired.

**NOTE:** Enhancing the appearance of 2-color patterns (screen 1/4):

1. Place darker color thread on bobbin. Thread machine with lights.
2. After selecting pattern, press Elongate key and set to 5x.
3. Press button to access "pop-up" screen. (see page 48)
4. Decrease stitch length to 0.2.

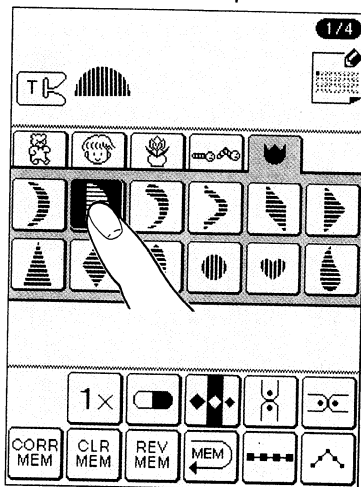
Name and function of modifier key		Result
Pattern elongate key		
Turn over key		
Repeat pattern key		
Pattern position key		
mirror Image key		Use for non-symmetrical patterns 
Enlarge/Reduce Size key		
Two-color key		

## How to adjust Tension and Stitch length on Single Regular Patterns.

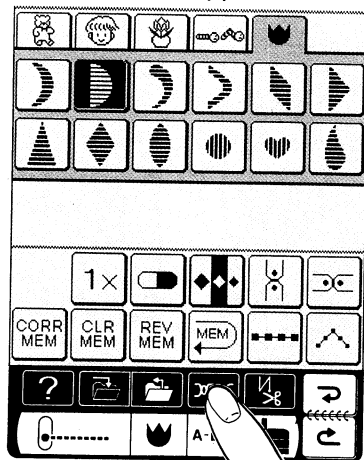
Tension can be adjusted on all Single Regular Patterns screen 1/4 ~ 4/4 .

Stitch length can be adjust on all screen 1/4 and selected patterns screen 2/4 .

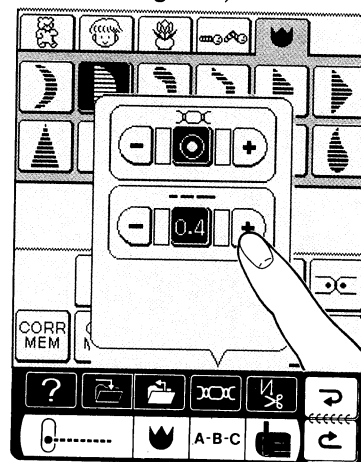
- 1** Select desired pattern.



- 2** Press Thread Tension Manual Button. "Pop-up" screen will appear.



- 3** Adjust stitch length (see Page 20).  
Adjust thread tension (see Page 22).



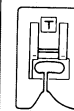
## Continuous Regular Pattern Sewing

- 1** Press button.

- 2** Press key.

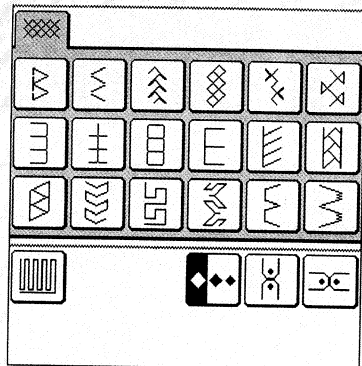
**NOTE:** Continuous patterns cannot be entered into working memory or filed in long term memory.

Presser foot to be used

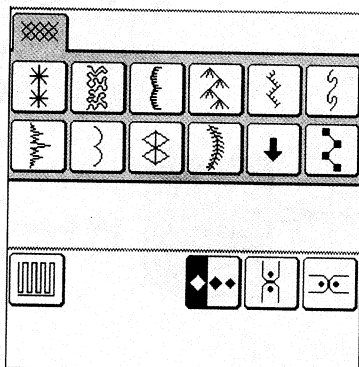


Decorative stitch foot (T)

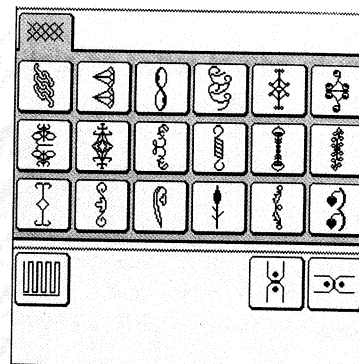
Touch-screen 1.



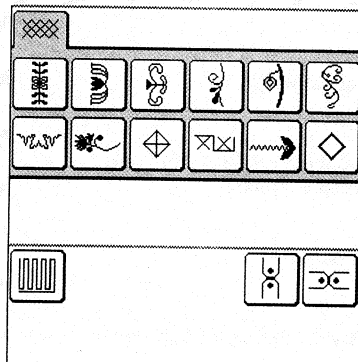
Touch-screen 2.



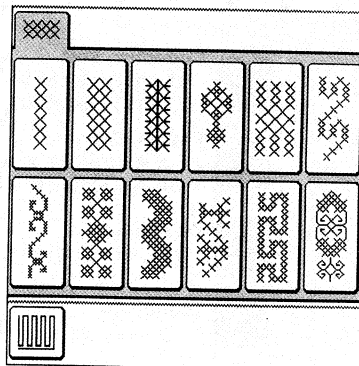
Touch-screen 3.



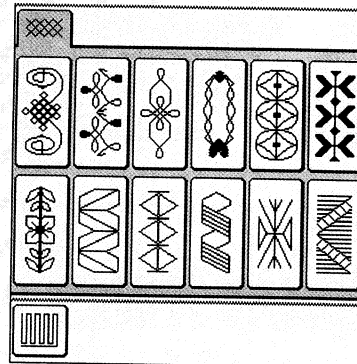
Touch-screen 4.



Touch-screen 5.



Touch-screen 6.



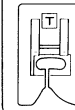


# Alphabet Stitch Sewing

How to select alphabet on LCD touch-screens.


-  7mm Block style.

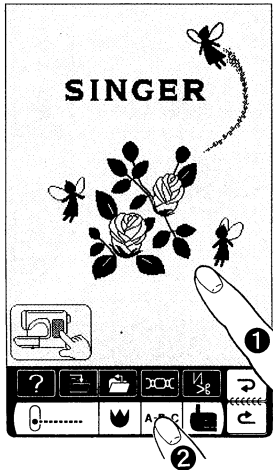
Presser foot to be used



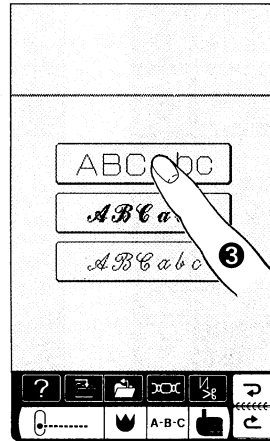
Decorative stitch foot (T)

1 Touch Welcome Screen.

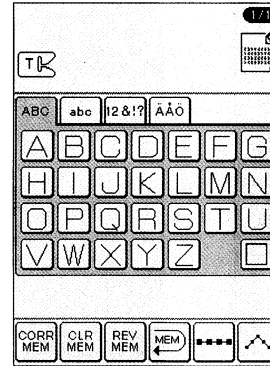
2 Press  button.




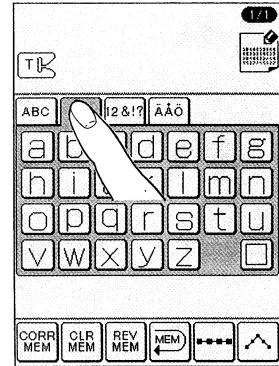
3 Press  key.




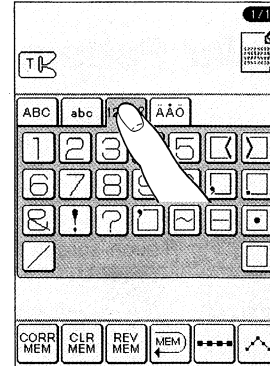
First touch-screen.



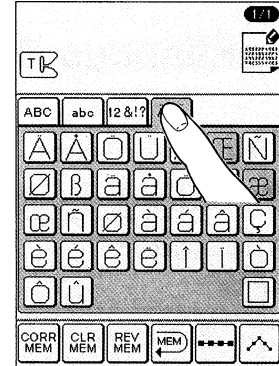
Press  file key.





Press  file key.

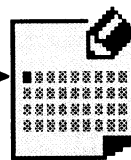
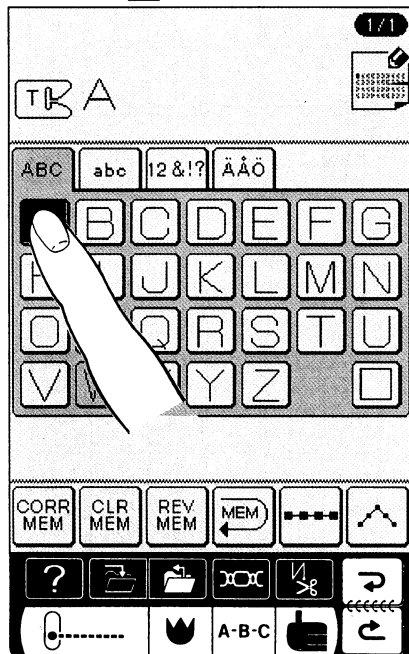


Press  file key.



How to select letter of alphabet.

- Pressing  key once will select .



[A] is now in memory.



Correction key:  
Use this key to correct errors within memory sequence.



Pattern clear key:  
Press this key to delete a wrong letter. Hold finger on key to delete everything in memory.



Review key:  
Press this key to review patterns.

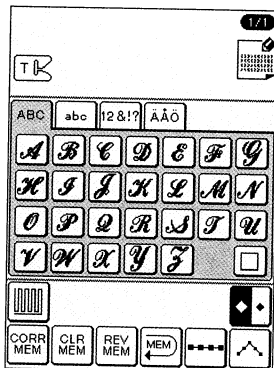


Return key:  
Memory will return to sewing start point of patterns.

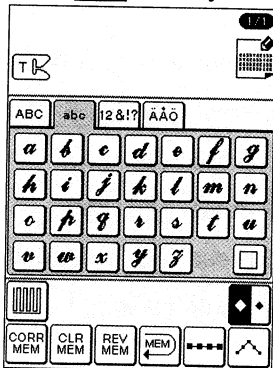


• *ABCabc* 15 and 25mm Script style.

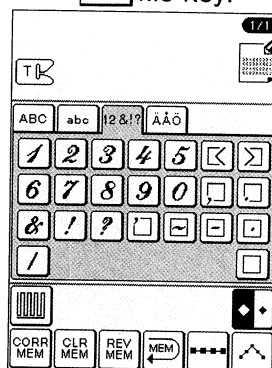
First touch-screen.



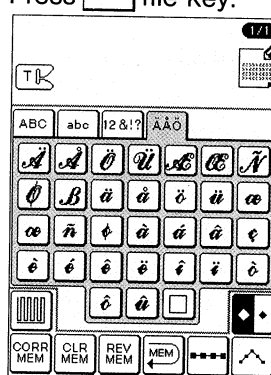
Press **abc** file key.



Press **12&!?** file key.



Press **ÄÄÖ** file key.



How to change size.

First time key is pressed:

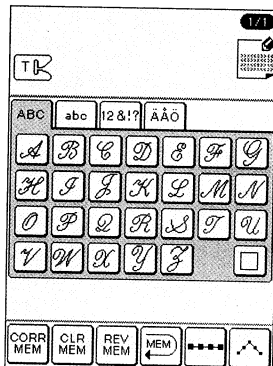


Second time key is pressed:

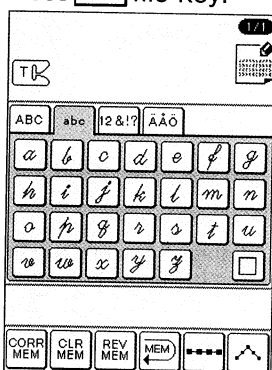


• *ABCabc* 7mm Script style.

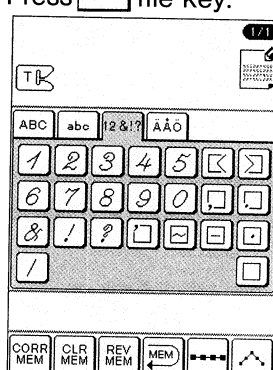
First touch-screen.



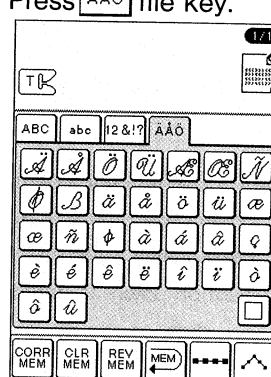
Press **abc** file key.



Press **12&!?** file key.



Press **ÄÄÖ** file key.



**NOTE:** DO NOT PRESS TOO HARD ON TOUCH-SCREEN.....A LIGHT TOUCH IS ALL THAT IS REQUIRED.

## How to Combine Patterns.

### Combine upper case and lower case.

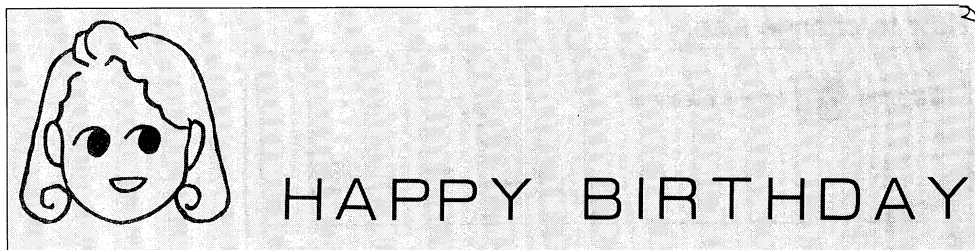
Up to 40 patterns may be entered into memory.

(Example)



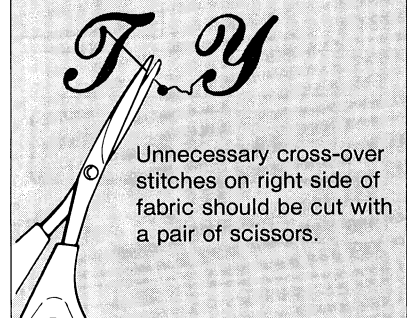
- 1 Press alphabet button .
- 2 Press key.
- 3 Press key.
- 4 Press key.
- 5 Press key, and , , , key.
- 6 Begin sewing.

### Combination Fun-Face and Alphabet.



- 1 Press button.
- 2 Press key.
- 3 Press desired , , , key to make face. And press key.
- 4 Press Alphabet button .
- 5 Press key.
- 6 Press , , , , , , , , , , , , , keys.
- 7 Begin sewing.

#### How to Cut Cross-over Stitch.



Data which has been placed in memory can be cancelled with any of following three methods.


1. Press clear button to remove one pattern at a time or hold finger on key to clear all memory.
2. Press Utility Pattern Button .
3. Turn off power to machine then turn it back on.

} All data in memory will be deleted at once.  
} Does not apply to filed data.


☆ Press key to review sequence of alphabet or single Patterns. For Single patterns a "Pop-up" screen will appear and settings of elongation, turnover, mirror Image and size will show.

☆ To return to original screen touch pop-up screen.

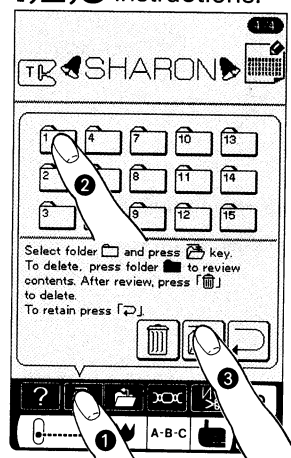
# Filing, Deleting And Recalling Of Pattern/Alphabet Stitches.




When a pattern or letter is selected and it appears on the upper portion of the LCD screen it is automatically memorized in the working memory. A maximum of 40 letters or patterns can be memorized in the working memory which is cleared if the power is turned OFF. To transfer the working memory to filed long term memory press  button. A pattern or word sequence which is frequently used can be filed for easy use at any time. There are 15 file folders which each can hold as many as 40 patterns or letters.

## Filing in long term memory

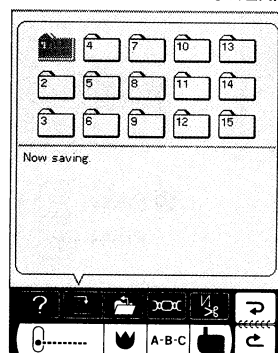
**NOTE:** When no patterns are in working memory and  is pressed, only the deleting screen will be indicated.

Follow instructions.  
**1,2,3**

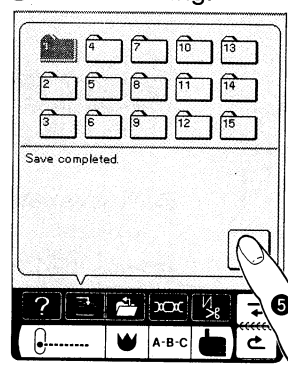


- 1 Press  button.
- 2 Press selected  to be retained.
- 3 Press  button.

Wait: Caution DO NOT TURN OFF POWER.  
**4**



**5** Finalize Filing.

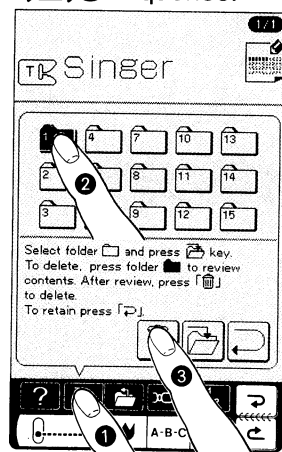





- 5 Press  key.

ORIGINAL SCREEN

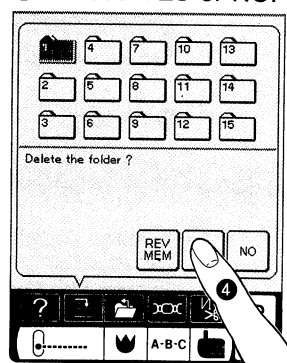
## Deleting long term memory



Follow sequence.  
**1,2,3**




- 1 Press  button.
- 2 Press selected  to delete.
- 3 Press  key.

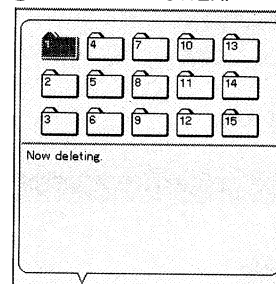
**4** Choose YES or NO.



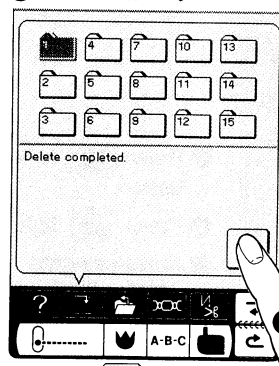
- 4 Press  key if you wish to delete. Press  key if you wish to cancel.

**NOTE:** If you wish to review contents of file prior to deleting it, press  key.

Wait: Caution DO NOT TURN OFF POWER.  
**5**



**6** Confirm.

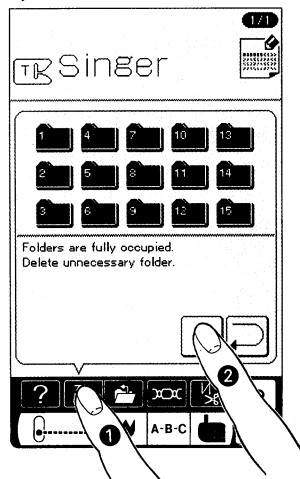


- 6 Press  key.

ORIGINAL SCREEN

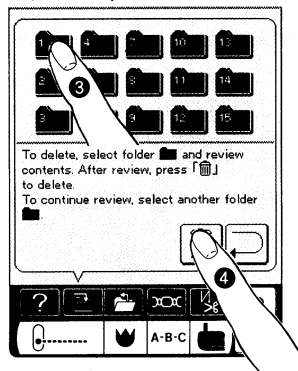
## Filing in long term memory when all files are fully occupied.

**1,2** Follow instructions.



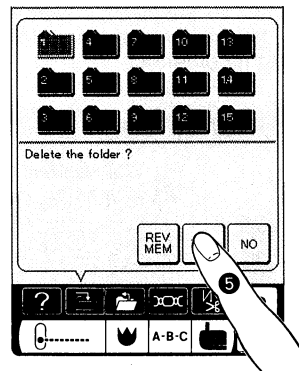
- 1 Press button.
- 2 Press key.

**3,4** Follow sequence.



- 3 Press selected to delete.
- 4 Press key.

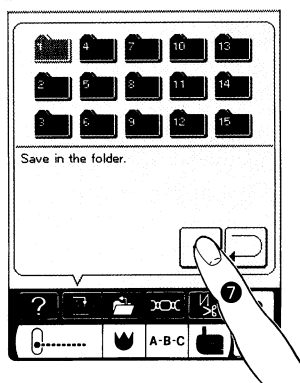
**5** Choose Yes or No.



- 5 Press key if you wish to delete. Press key if you wish to cancel.

Wait:  
Caution DO NOT  
TURN OFF POWER  
Now deleting

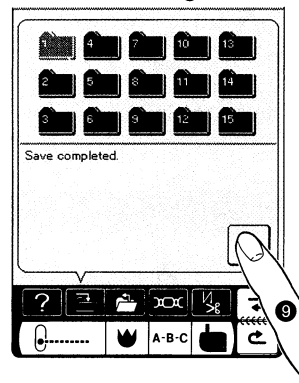
**7** Confirm.



- 7 Press key.

Wait:  
Caution DO NOT  
TURN OFF POWER  
Now Saving

**9** Finalize filing.

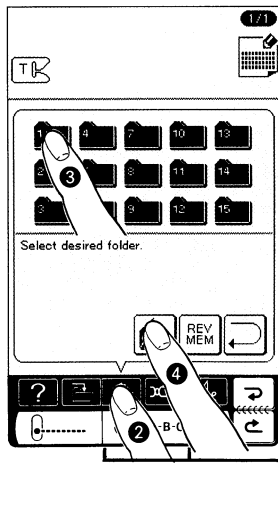


- 9 Press key.

ORIGINAL SCREEN

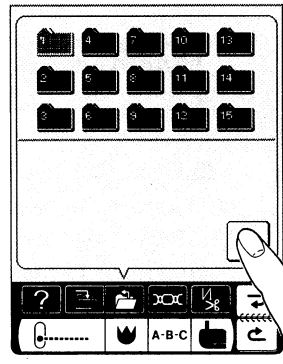
## To recall word or pattern sequence from long term memory file.

**1,2,3,4**



- 1 Press or button.
- 2 Press button.
- 3 Press selected to be recalled.
- 4 Press key.

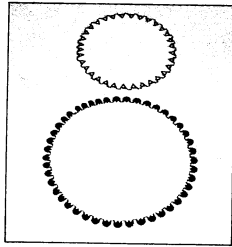
**5** Finalize recall.



- 5 Press key.

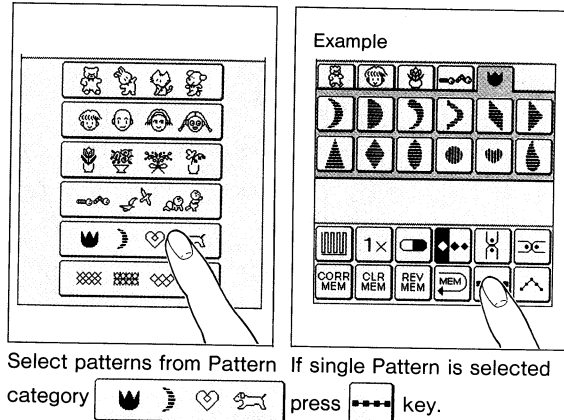
Recalled file can  
now be sewn or  
if desired modified.

# Circular Pattern Stitch

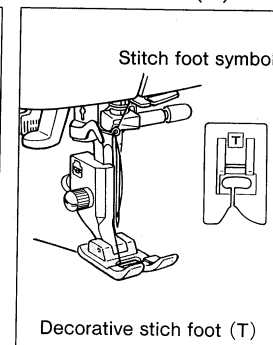


Use circular ruler for sewing outside periphery of coasters and emblems. Circular ruler allows machine to sew circular patterns of 3 to 10cm radius.

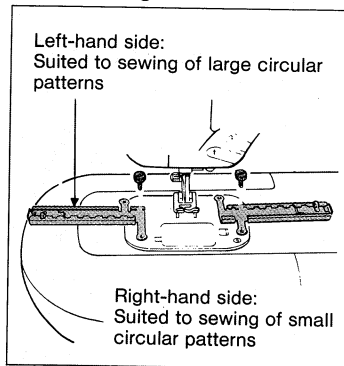
## 1 Select pattern as desired.



## 2 Attach decorative stitch foot (T).

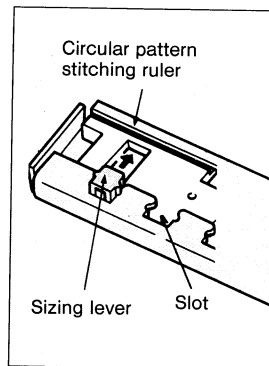


## 3 Attach circular pattern stitching ruler.

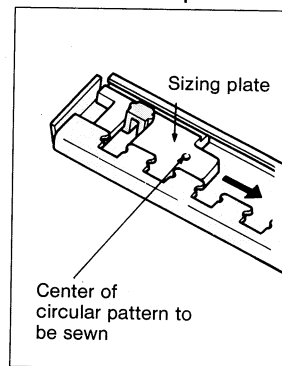


Attach circular pattern stitching ruler to left- or right-hand side of Needle plate using screw supplied with machine.

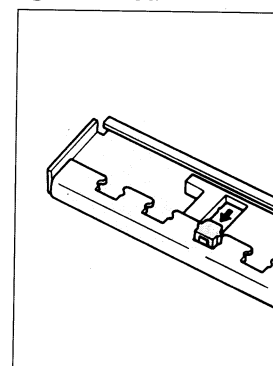
## 4 Move sizing lever by firmly pushing from slot.



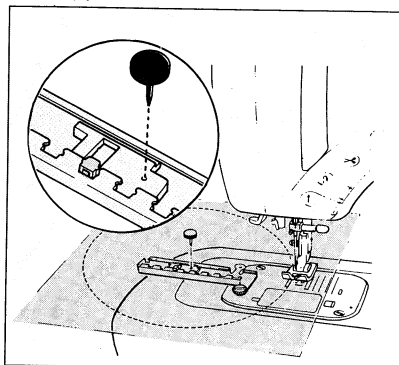
## 5 Move sizing plate to desired position.



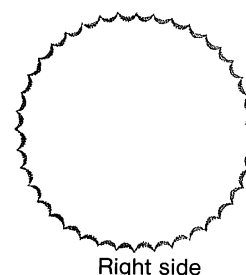
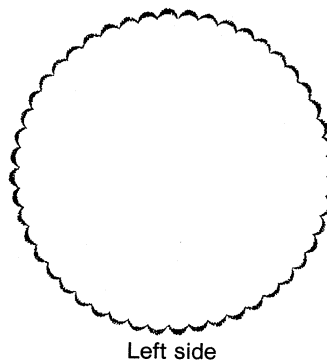
## 6 Push sizing lever into slot.



## 7 Place material on machine and hold in position using tack supplied with machine.



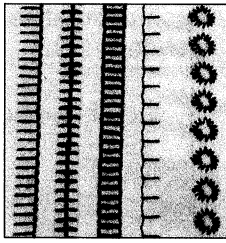
**NOTE:** Symmetrical patterns such as bead ( ) will sew identical whether circular pattern stitching ruler is attached to the left hand or right hand side of the needle. Nonsymmetrical patterns such as crescent ( ) will sew the mirror image depending on attachment to left or right side of needle. Patterns can be modified (see page 47)



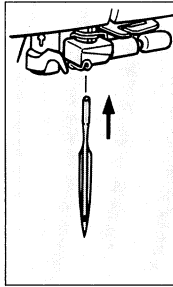


**CAUTION:** Make sure power/light switch is off before changing needle.

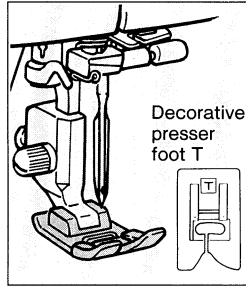
## Heirloom Sewing (Using wing needle)



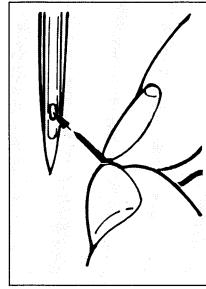
**1** Insert wing needle.



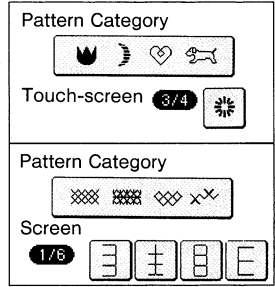
**2** Use correct presser foot:



**3** Automatic needle threader cannot be used.



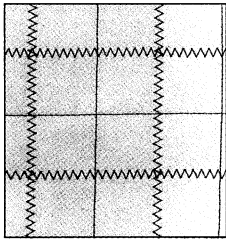
**4** Recommended Heirloom Patterns.



Pattern is single pattern so press or key.

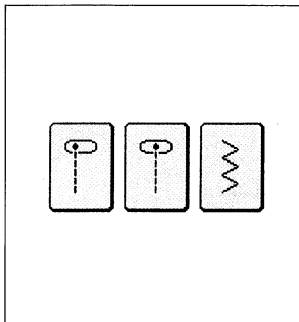
☆When using wing needle, do not use thread cutter (needle may bend).

## Quilting (Using Quilt guide)



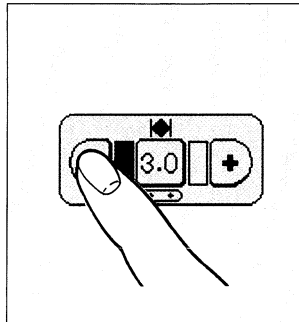
Two plies of material are joined together with parallel rows of stitching. Batting is usually placed between layers of material, which is used for protection against cold or for decoration.

**1** Select pattern as desired.

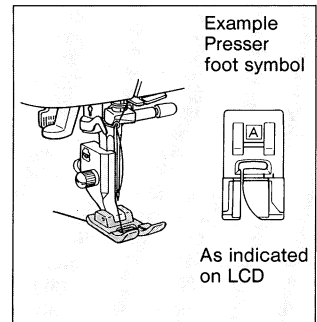


Select a pattern from straight stitch, zigzag patterns or all continuous patterns as desired.

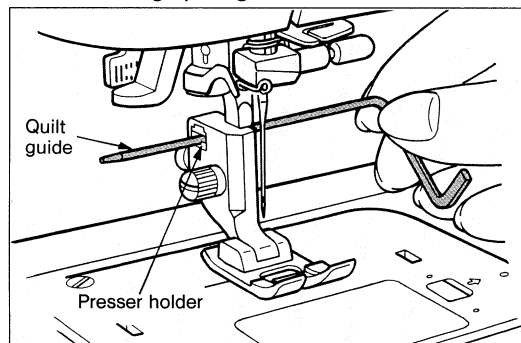
**2** When using zigzag stitch width may be used.



**3** Use correct presser foot.

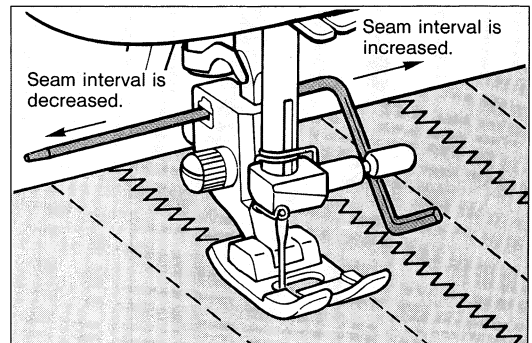


**4** Attaching quilt guide.



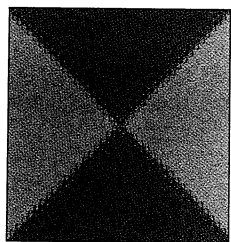
Insert quilt guide into hole in presser foot holder.

**5** Sew quilting on material using quilt guide to trace pattern previously sewn.



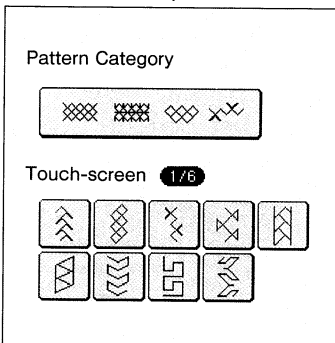
Spacing between lines of stitching may be adjusted by moving quilt guide.

# Patch Work



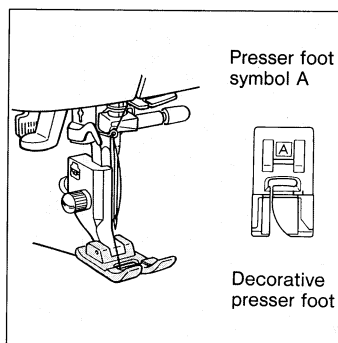
With pattern stitches, fabrics can be joined together to form a strong seam.

**1** Select from recommended patch work patterns.



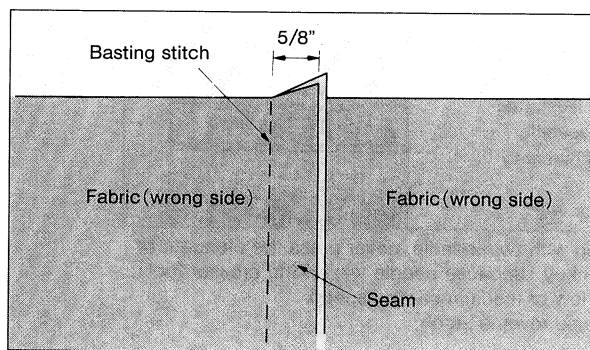
Choose one of above nine patterns.

**2** Use correct presser foot.



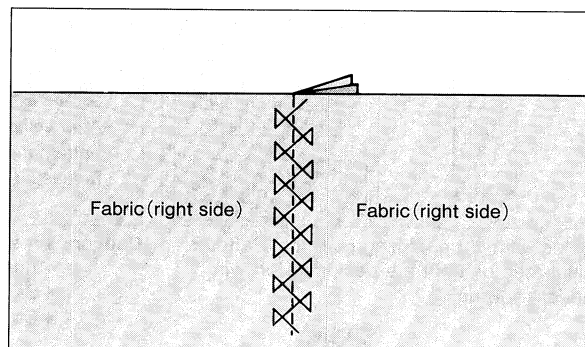
## Overlapping Patch

**1**



Place two pieces of fabric right sides together and sew a basting stitch. Press seam to one side.

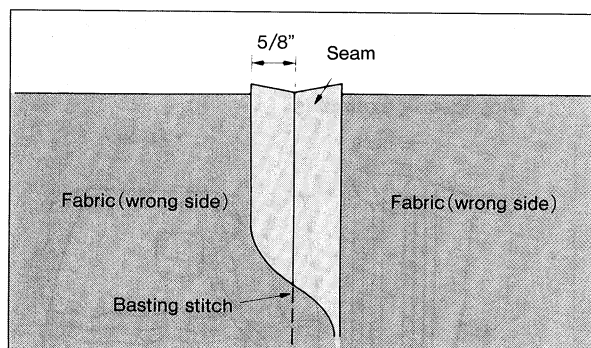
**2**



Sew a pattern stitch on top of seam.

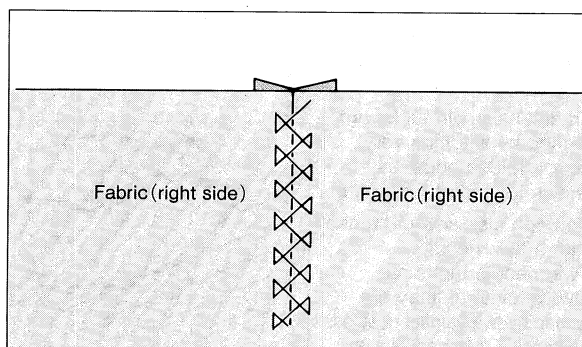
## Open Patch

**1**



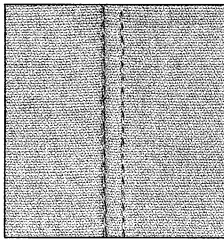
Place two pieces of fabric right sides together and sew a basting stitch, Press seam open.

**2**



Sew a pattern stitch on top of seam. Remove basting stitch for open fagotted appearance.

# Twin Needle Sewing



Twin needle sewing produces two parallel lines of closely-spaced stitching.

**NOTE:** Automatic needle threader and automatic thread cutter cannot be used.

**IMPORTANT:** Use only Singer branded twin needle style #2025.

- With machine turned off, insert twin needle into needle clamp, and thread machine as for single-needle sewing through left needle eye.
- Attach auxiliary spool pin into hole by bobbin thread cutter. Place second spool of thread on it; and, again, thread machine as usual except as noted in point 4 below. The second thread will thread through right needle.

**1** Attaching twin needle.

**2** Use correct presser foot.

Standard presser foot (A) or decorative stitch foot (T).

**3** Attach auxiliary spool pin.

**4** Thread machine.

Thread left needle as usual. Put right needle thread into outer slit, by-pass final thread guide and then through right needle.

## 5 Patterns for twin needle sewing.

**Straight stitch**

Center needle position

**Zigzag stitch**

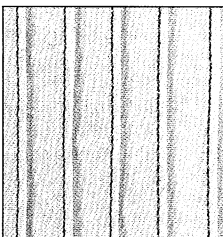
Adjust stitch width to 4.0mm or less

- Press the button.
- Select patterns from pattern category , touch-screen **174** as illustrated.
- After selecting specific pattern it is mandatory to reduce size: or .

Select straight or zigzag patterns. Patterns illustrated on right are designed for twin needle sewing.

**Caution:** \* If sewing with twin needle, never press the elongate or position key (because needle will hit the presser foot).  
 \* Sew at low or medium sewing speed.  
 \* Do not use reverse stitch.

## Pin Tucks



A type of fabric decoration. Commonly used in French sewing.

Traditionally, pin tucks are formed by stitching very near a folded edge, as shown in steps 1 through 5. You can also sew pin tucks with a twin needle.

Twin needle tucks are always even as they are formed by two parallel needles. Decreasing top thread supply (increasing tension) will result in a more pronounced pin tuck.

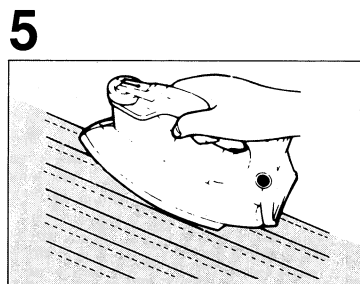
**1** Select straight stitch.

**2** Use correct presser foot.

Standard presser foot (A) or blindstitch presser foot (Q)

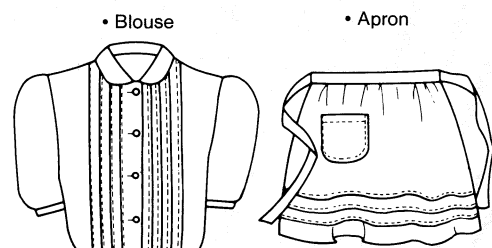
**3** Make folds on material for pin tuck using an iron so that they are neatly finished.

**4** Sew folds taking care not to stretch them. A blindstitch presser foot will help finish the folds more beautifully.



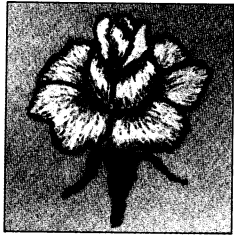
After finishing sewing, tilt pin tuck to one side and press.

### Application examples

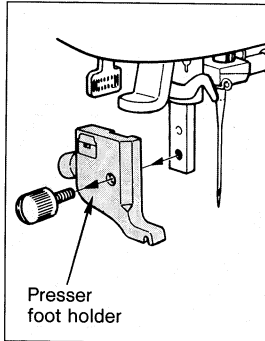




# Darning/Free-motion Embroidery

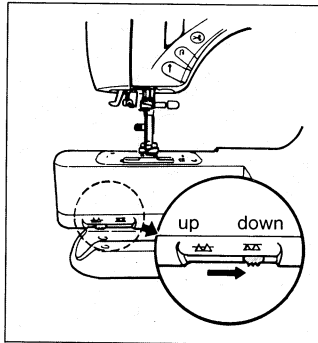


**1** Remove presser foot holder.

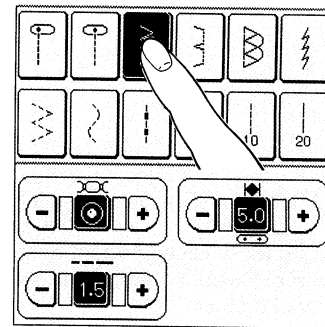


\* Before removing presser foot holder, be sure to turn off power to sewing machine.

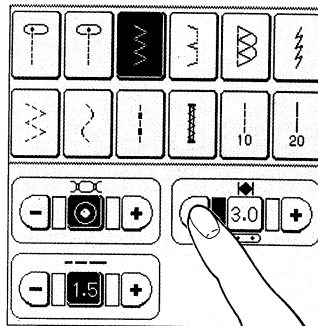
**2** Move drop feed lever to down position.



**3** Select zigzag stitch pattern.

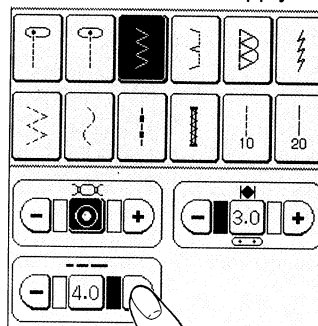


**4** Select stitch width.



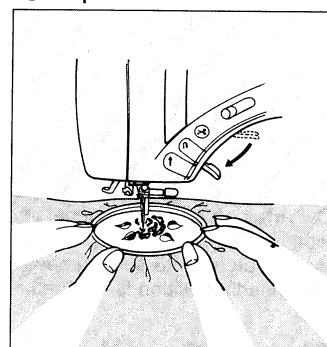
Select 0.3 to 7.0 (different stitch widths available)

**5** Set stitch length to 4.0 to increase thread supply.



Set stitch length to 4.0 using stitch length override button.

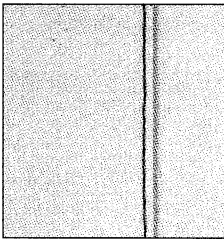
**6** Set embroidery hoop in place.



Lower presser foot lifter and start sewing.

**NOTE:** It is possible to sew without embroidery hoop if optional Darning/Embroidery foot is used. See page 66 for further information.

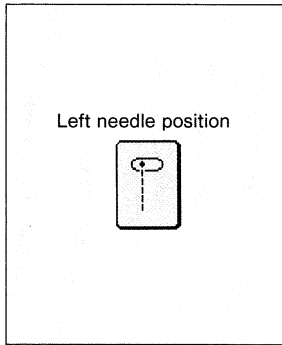
## Rolled Hemming



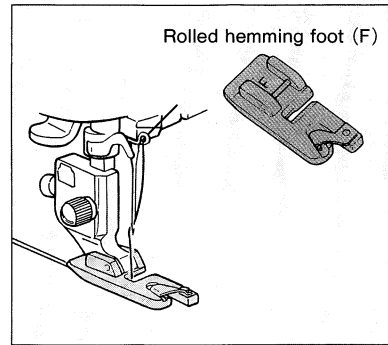
Material edge is hemmed while rolling it under.

Used for finishing bottom of shirts and blouses and edges of frills and handkerchiefs.

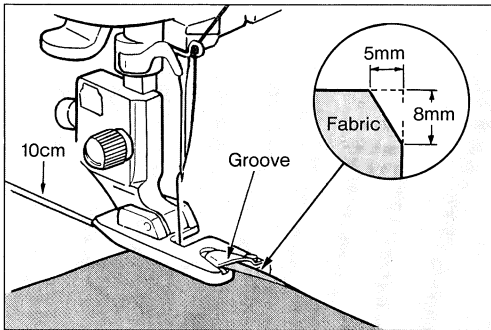
**1** Select straight stitch.



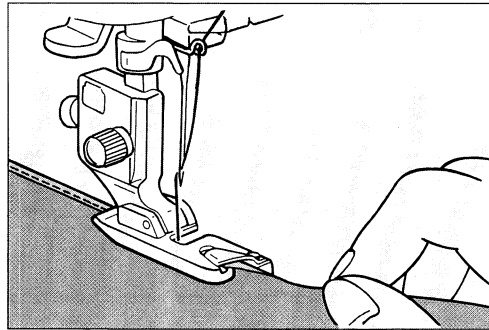
**2** Change foot.



Attach rolled hemming foot supplied in accessory bag.



Cut away a corner of material in order to make work easier.  
Insert material into spiral groove in hemmer foot until needle position is reached.

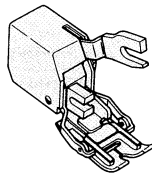


Drawing ends of needle and bobbin threads, turn handwheel 3 or 4 turns by hand to guide material to hemmer foot.

## Even Feeding

To prevent slippage of material, use even feed foot.

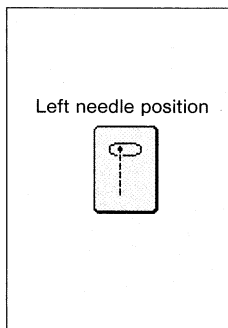
- \* For matching plaids and designs.
- \* To prevent slipping, stretching or sticking when sewing fabrics such as synthetic suede, sheers, heavy knit and quilted.



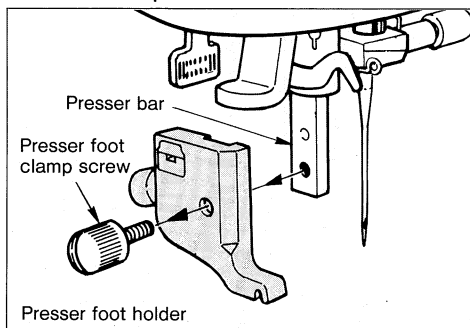
Use even feed foot only for forward stitching.

- \* Do not use it for any patterns which feed sideways or feed both forward and reverse.

**1** Select straight stitch.

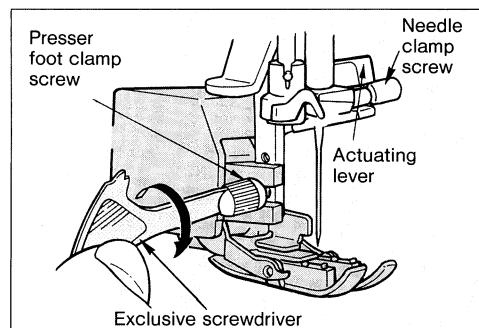


**2** Remove presser foot holder.



Lift presser bar, remove presser foot clamp screw and remove presser foot holder.

**3** Attach even feed foot to machine.

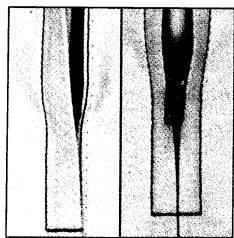


Put forked section of actuating lever around needle clamp, attach to presser bar and securely tighten presser foot clamp screw.

- \* Sew at low or medium sewing speed.

- \* To sew elastic materials such as knits and jersey, set presser foot adjusting lever to "LOW".

# Inserting Zippers

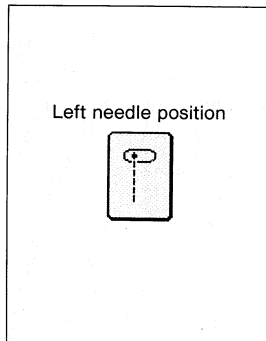


Zippers may be inserted in several ways. Type and location of zipper will help select right method.

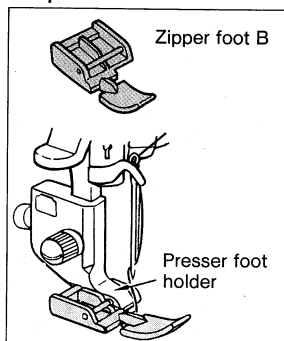
**Lapped** zippers usually are inserted in side seam of the garment.

**Centered** zippers are centered in opening, and are suitable for almost all fabrics.

**1** Select straight stitch.

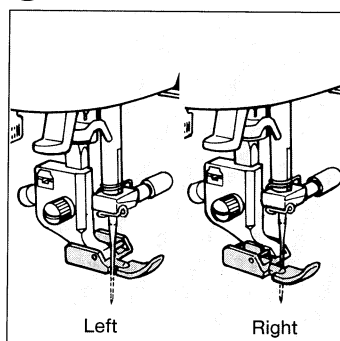


**2** Use correct presser foot.



Attach zipper foot B to machine. Zipper foot can be put on to left or right of needle, depending on where bulk of garment is placed.

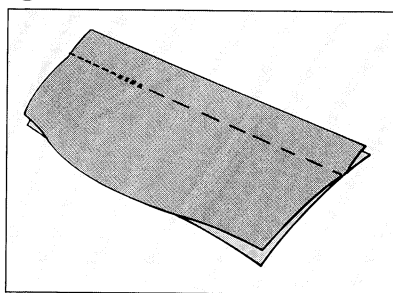
**3**



\* If zipper is to left needle, left side of zipper foot goes on shank.  
\* If zipper is to right of needle, right side of foot goes on shank.

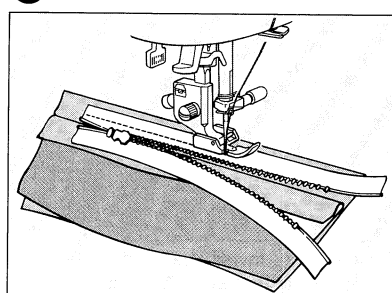
## Lapped Insertion

**1**



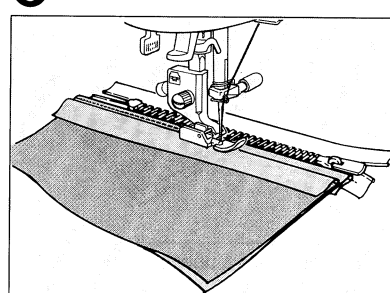
A zipper is lapped when one edge of fabric opening overlaps and conceals it, allowing only one stitching line to show.  
\* Machine-baste zipper opening together on seamline, and press open seam allowance.  
\* Attach left side of zipper foot to shank.

**2**



\* Open zipper and flatten back seam allowance, as shown, with zipper face down and edge of teeth following seam line. Zipper's top should fall between 1/8" and 3/8" below garment top seam.  
\* Stitch zipper to seam allowance from bottom to top.

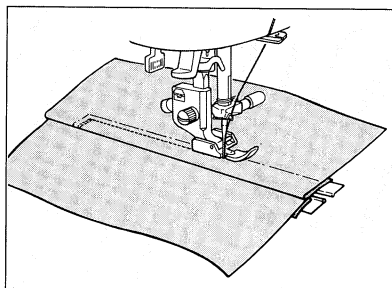
**3**



\* Attach right side of zipper foot to shank.  
\* Close zipper and turn it face up.  
\* Smooth back seam allowance at edge of zipper.  
\* Stitch zipper from bottom to top, as shown, near seam allowance folded edge.

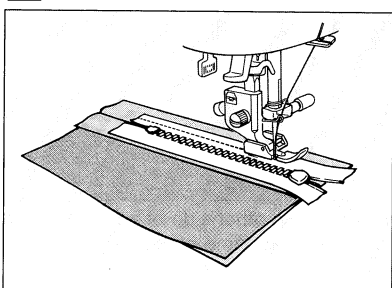
## Centered Insertion

**4**



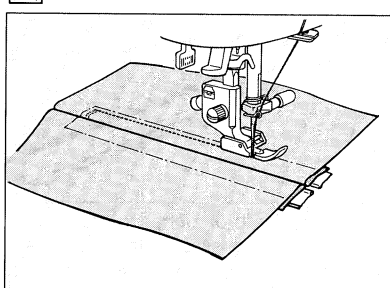
\* Pin or machine-baste zipper to garment from wrong side, through zipper tape, seam allowance, and front of garment.  
\* Turn garment right side out.  
\* Attach left side of zipper foot to shank.  
\* Stitch across lower end of zipper and up to waistline. Use basting stitches as a guide.  
\* Remove basting and press.

**1**



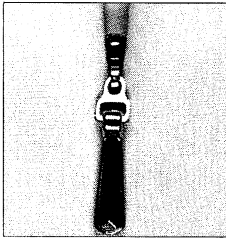
\* Machine-baste zipper opening to seamline, and press open seam allowance.  
\* Place open zipper face down on seam allowance with teeth against seamline.  
\* Stitch zipper to seam allowance from bottom to top.

**2**



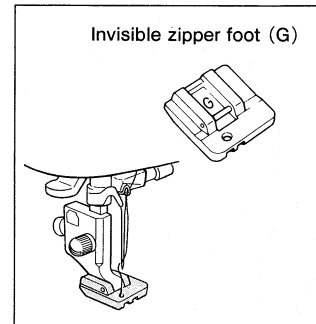
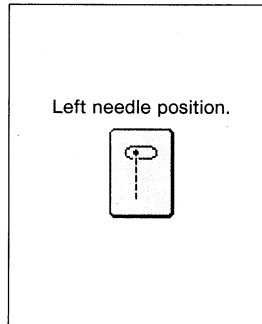
\* Baste through zipper tape, seam allowance and garment exterior.  
\* Turn garment right side up and topstitch it to zipper, sewing through all layers.  
\* Remove basting and press.

# Inserting Invisible Zippers



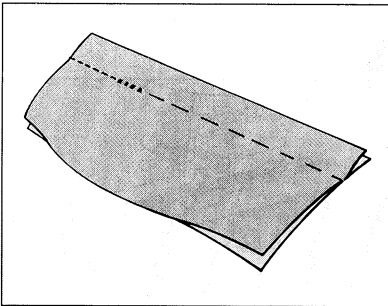
Since a seam does not appear on right side of material, opening can be finished with material edges neatly butted.

**1** Select straight stitch. **2** Change foot.



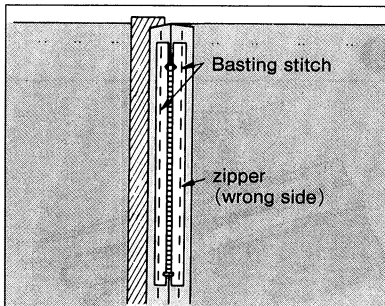
Attach invisible zipper foot supplied in accessory bag.

**3**



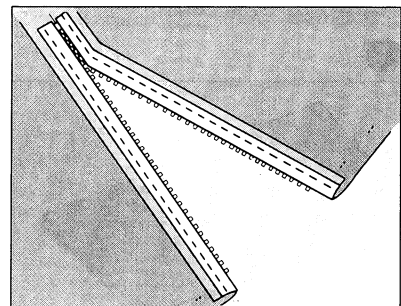
\* Machine-baste zipper opening together on seamline, and press open seam allowance.

**4**



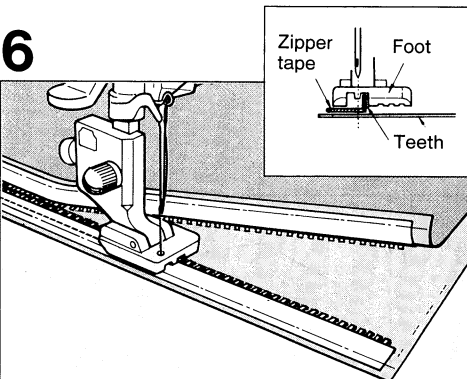
Set center of invisible zipper on seam. Baste zipper to seam allowances.

**5**



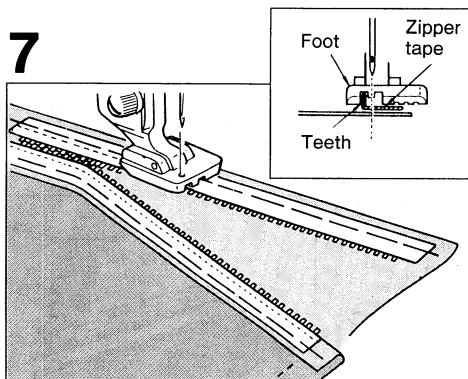
Undo basted seam up to opening end shown and open zipper.

**6**



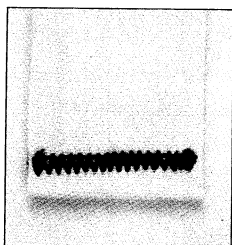
After fitting teeth of zipper to groove on invisible zipper foot and raising teeth with fingers, sew zipper tape on seam allowance from opening end by forming seam along edge of teeth.

**7**



Sew other side of zipper tape on seam allowance using same procedure.

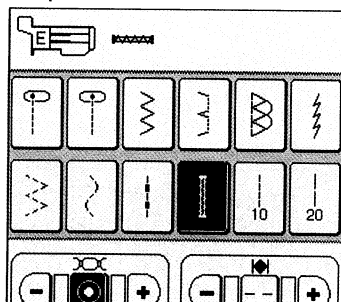
# Bartacking



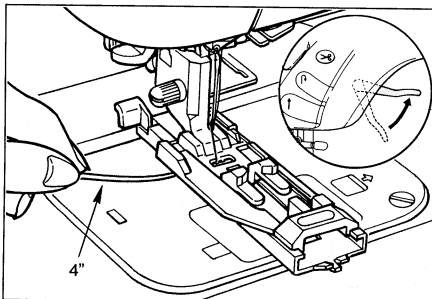
Bartacks reinforce the portion that is always applied with force and is likely to fray.

- Bartacking length is determined by the reverse stitching button. Note that the maximum bartacking length is 20 stitches. Once the number of bartacks reaches 20, the machine automatically starts reverse stitching.
- When sewing a multi-layered portion of the fabric that does not allow the presser foot to be leveled, use a filler cloth or a sheet of heavy-weight paper.

**1** Select bartacking stitch pattern.

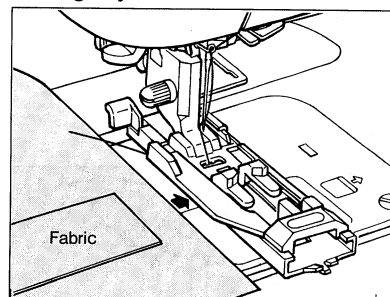


**2** Change foot, and position Needle and Bobbin threads.



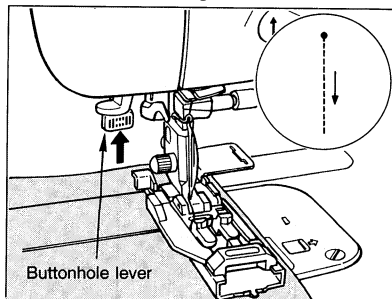
Attach buttonhole foot as illustrated. Pass the needle thread down under the foot to routing it to the side.

**3** Lightly hold material.



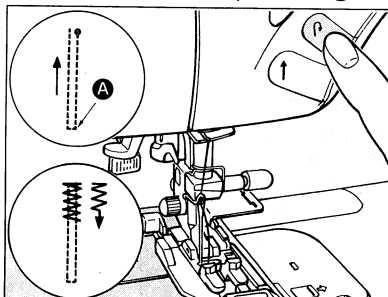
Place edge of material under presser foot. Pull upper and bobbin threads to rear of machine and lower presser foot.

**4** Begin sewing.



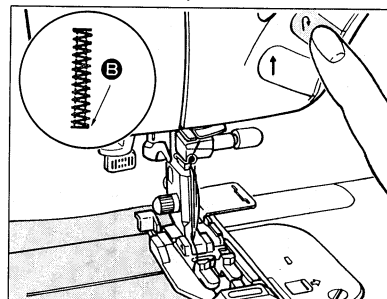
**NOTE:** the buttonhole lever remains stored.

**5** Press the reverse stitch button at predetermined position **A**.

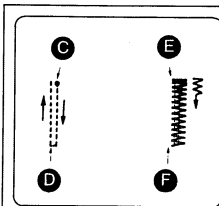


Once the needle returns to the start position, the machine automatically starts zigzag stitching.

Upon completion of stitching **B**, press the reverse stitching button to stop the machine.



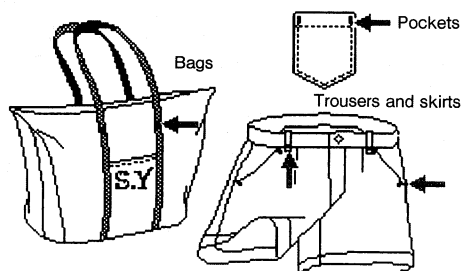
To continuously sew bartacks of the same length two or more times, follow the procedure described below:



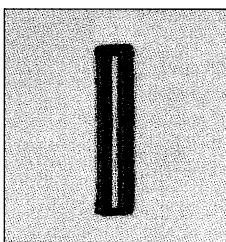
- **C** Start
- **D** Automatically returns
- **E** Automatically U-turn
- **F** Press the reverse stitching button to stop the machine.

\* To change the sewing length stored in memory, reselect the pattern and follow steps 1 through 6.

## Application examples

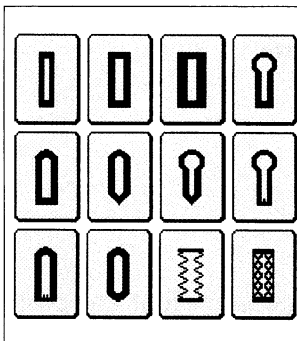


# Manual Buttonholes

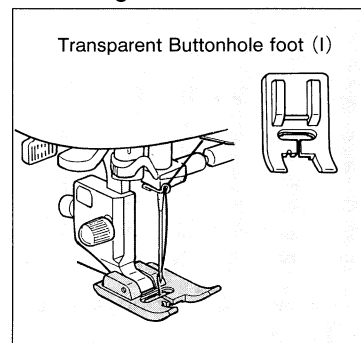


- \* Automatic foot can make buttonholes up to 1 1/2: use transparent foot to create larger buttonholes.
- \* To make ribbon casings
- Other uses for Transparent foot I.
- \* For french machine-sewing: mock whip and roll, pin-tucking and entredeux, are better controlled because there is a groove in bottom of foot.
- \* For satin stitching.

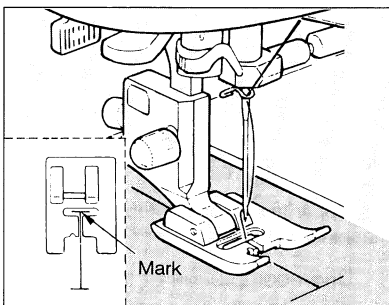
**1** Select desired stitch pattern.



**2** Change foot.

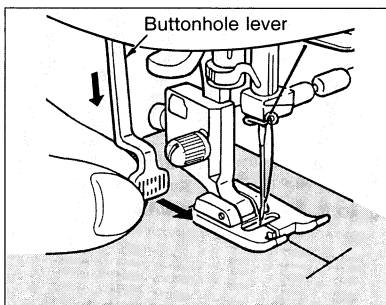


**3**



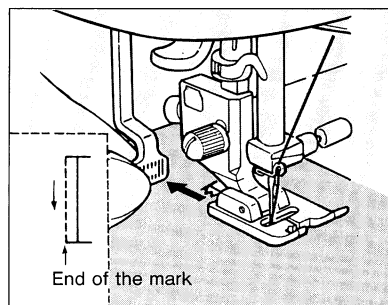
Mark material to indicate buttonhole placement.  
Lower buttonhole foot so that mark is at center of needle hole in foot.

**4**



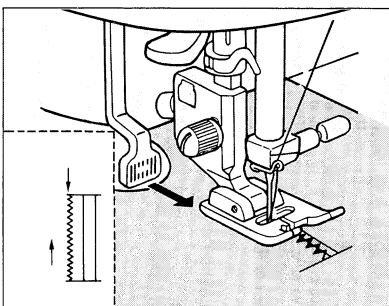
Lower buttonhole lever.

**5**



When needle reaches end of marker line, slightly press buttonhole lever towards rear of machine.

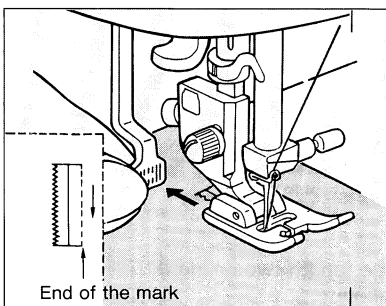
**6**



When needle reaches beginning of mark, slightly pull lever towards front of machine.

- \* Machine starts straight stitching on right-hand parallel section of buttonhole.

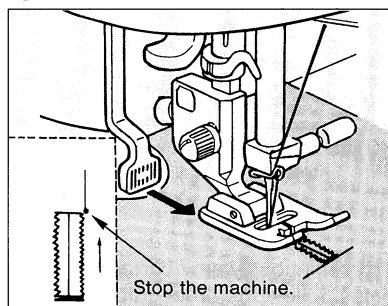
**7** Start sewing while slightly pulling buttonhole lever towards front of machine.



When needle reaches end of mark, slightly press buttonhole lever towards rear of machine.

- \* Machine starts zigzag stitching on right-hand parallel section of buttonhole.

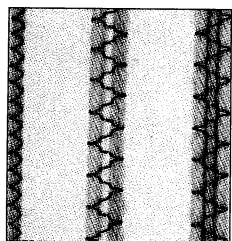
**8**



When needle reaches beginning of mark, slightly pull lever towards front of machine and sewing machine will start bartacking, perform fastening stitching and stop.

- \* If sewing machine does not operate as described above, stop machine and press buttonhole pattern key again. It will start buttonholing from beginning.

# Attaching Cords



## \* Gathering and shirring

Place pearl cotton into center of foot and zig-zag over it.

Secure one end of pearl cotton and pull other end to gather.

Use same method with elastic threads to create shirring.

## \* Decorative shirring

Experiment with decorative threads, like ribbon thread or metallics.

Place cording into slots and stitch using multi-stitch zigzag.

## \* Applying trims.

## 1 Select desired stitch pattern.



⇒ For one cord

(Manual zigzag stitch width 1.0-2.0)

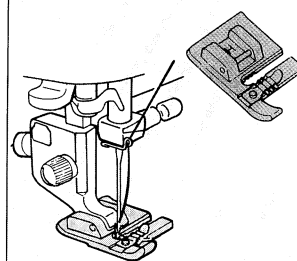
Multi-stitch  
Zigzag stitch



⇒ For three cords

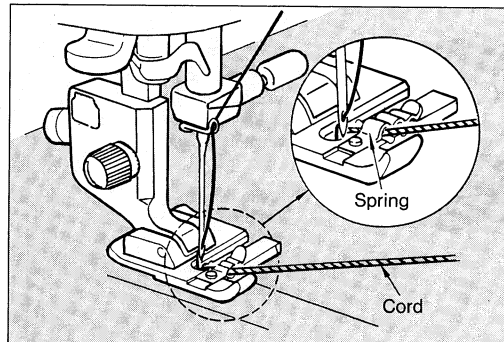
## 2 Change foot.

Cording foot (H)



## Sewing one cord

For sewing one cord, pass cord through center spring of cording foot, fit top end of cord in groove on sole of cording foot, then lower cording foot.

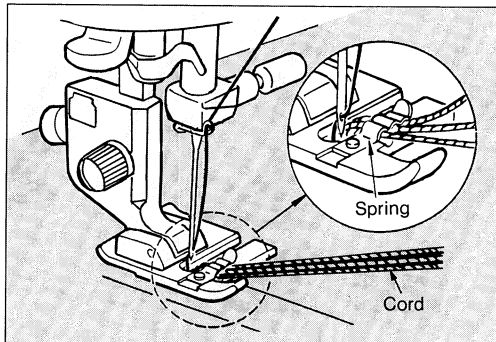


Sew cord on material using zigzag stitching function with zigzag width reduced (stitch width 1.0-2.0).

Make fastening stitches at beginning and end of seam by pressing reverse button.

## Sewing three cords

For sewing three cords, pass cords through all springs of cording foot and fit cord ends in groove on sole of cording foot as in case of sewing one cord. Then, lower cording foot.



Sew cords on material using multi-stitch zigzag stitch pattern.

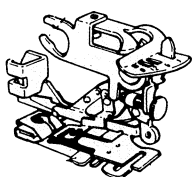
As in case of sewing one cord, make fastening stitches, draw cords out on wrong side of material and make a knot. Then trim cords.

\* To sew two cords, pass cords through rightmost and leftmost springs.

## Optional Accessories

★ Always use Singer genuine accessory feet. Off brand or generic accessories may cause poor performance, damage to sewing machine or injury.

### Ruffler presser foot (Part No.386028)

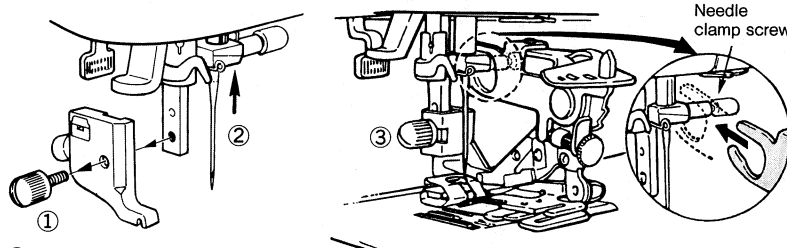


Ruffler quickly & easily produces professional looking ruffles on garments and home decorating.

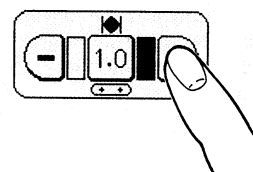
★ Be sure to turn power off before removing/attaching ruffler presser foot.

Select straight stitch pattern and adjust needle position to 1.0 (This is very important).

### Attaching ruffler.



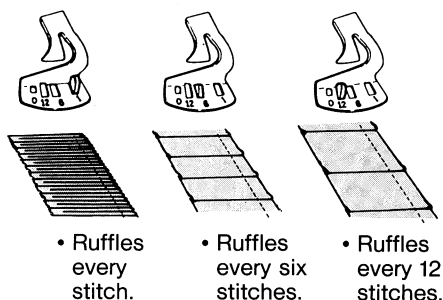
- ① Remove presser foot.
- ② Raise needle bar to highest position.
- ③ Fit ruffler fork onto needle clamp screw and attach to presser bar.
- ④ Tighten presser foot screw with exclusive screwdriver.



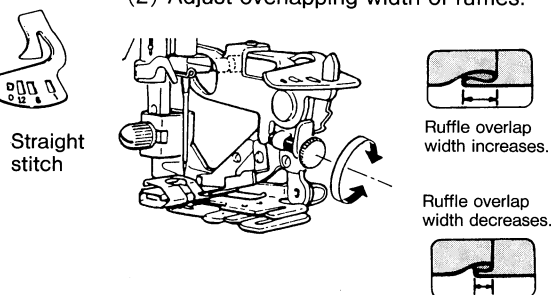
### Ruffling.

★★ NOTE: Sew test swatch before sewing on project.

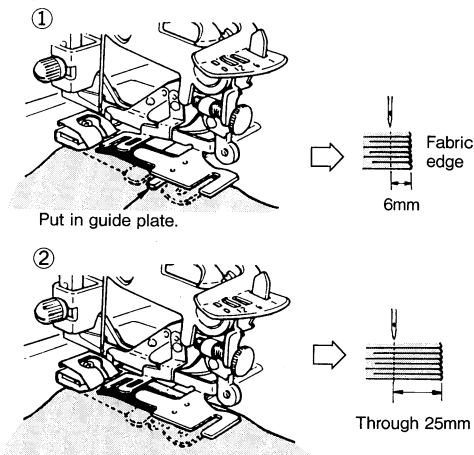
(1) Determine number of ruffles.



(2) Adjust overlapping width of ruffles.

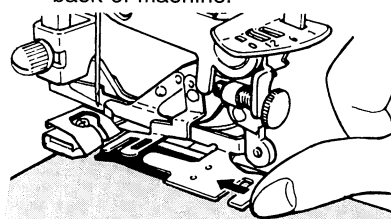


(3) Place fabric under ruffler foot.



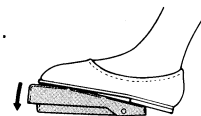
(4) Lower ruffler presser foot.

(5) Lightly push cloth feed plate towards back of machine.



(6) Turn handwheel counter clockwise to lower needle into fabric until fabric begins to fold.

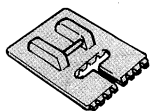
(7) Start sewing.





## Optional Accessories

### Pintuck foot (part No.386022)



#### Uses:

- Sews evenly spaced plain twin needle pintucks.
- Sews evenly spaced corded twin needle pintucks.

#### Procedures:

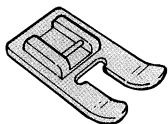
##### Plain pintucks

- 1) Insert twin needle and thread machine with two spools of thread, using auxiliary spool pin. (See page 57)
- 2) Select center needle position straight stitch (page 23)
- 3) Mark straight line for first pintuck.
- 4) Stitch along marked line. Increase tension as desired, to make pintucks stand up.
- 5) Place first tuck into desired groove on bottom of pintuck foot. Stitch, allowing groove to guide fabric for evenly spaced tucks.

##### Corded pintucks:

Follow procedure above, but place cording under fabric. Lower twin needle by hand to ensure cording is centered inbetween stitch, being sure to catch cording between needles.

### Open toe embroidery foot (Part No.386023)



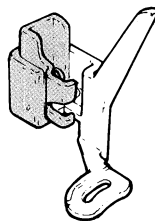
#### Uses:

- For satin stitching.
- For applique.
- For machine embroidery, cutwork and fagoting.

#### Procedures:

- This foot allows a clear view for sewing above techniques.
- Follow instructions found in Singer Sewing Reference Library Series.

### Darning/embroidery foot (Part No.386017)



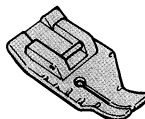
#### Uses:

- For free-motion embroidery, darning & monogramming.

#### Procedures:

- 1) Drop feed dog.
- 2) Place fabric into embroidery hoop (optional).
- 3) Attach foot and tighten presser foot screw with exclusive screwdriver. Begin stitching, moving hoop as you stitch. If not using hoop, grasp fabric firmly with two hands and hold taut. Sew at slow to medium even sewing speed.

### Quilter's foot (PartNo.386005)



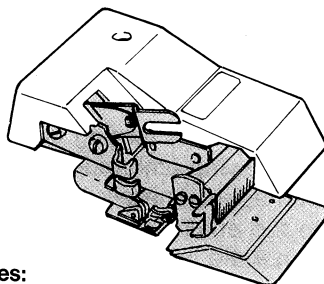
#### Uses:

- To sew perfect 1/4" seams for piecing quilt blocks.
- To sew narrow seams, such as those in doll clothes.

#### Procedures:

- Use in place of A foot.
- Select straight stitch pattern full left (automatic) position.

### Side cutter (Part No.386001)

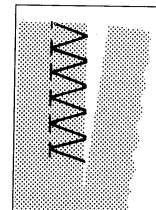


#### Uses:

- To cut and overedge fabric in one step.

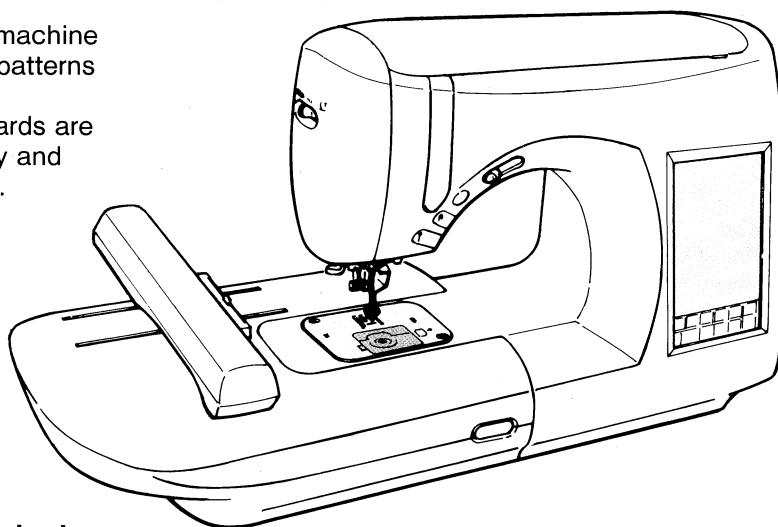
#### Procedures:

- Remove presser foot holder and attach side cutter. Follow instructions which come with side cutter.
- Tighten presser foot screw with exclusive screwdriver.



## Preparation for Embroidery sewing


This computer-controlled sewing machine comes with built-in alphabet and patterns for embroidery stored in memory. In addition, optional embroidery cards are available and add to the versatility and enjoyment of the sewing machine.



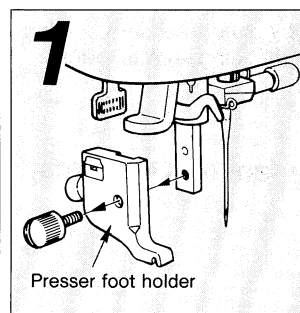
### Precautions about embroidery bed and embroidery cards (optional)

#### **CAUTION**

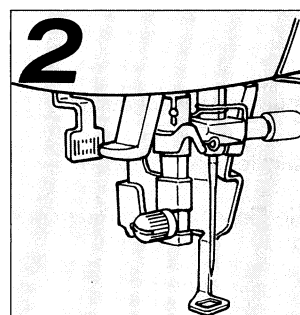
- Never carry the sewing machine with embroidery bed installed. This may cause the embroidery bed to drop and break or cause injury.
- Keep your hands or any other things away from embroidery bed while its carriage and embroidery frame are moving so as to protect against injury.

1. Be sure to turn power off before installing/removing embroidery bed.
2. Be sure to put embroidery cards in container case for storage.
3. In case of a power failure or turning power off while editing or sewing embroidery, it is possible within approximately 12 hours to return to the editing screen or exact embroidery needle location by pressing  key.
4. The sewing machine comes with three sizes of embroidery frames. Select an appropriate one depending on pattern size and embroidering position.

### Attaching embroidery foot (J)





Turn power off first, then remove presser foot holder.





Attach embroidery foot (J) in position.

**Before removing embroidery bed**

**1** Press  key appearing outside embroidery screen on LCD.

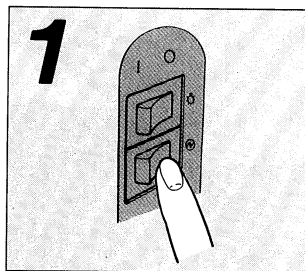
**2** If  key is shown on touch-screen press it. Then, carriage will return to storage position.

COMBINATION EMBROIDERY  
  
EMB UNIT STORAGE POSITION

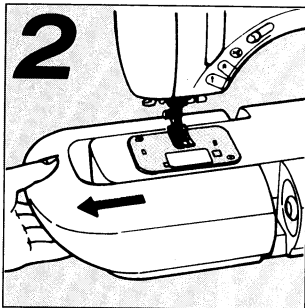
MULTIPLE HOOP EMBROIDERY  
  
EMB UNIT STORAGE POSITION

### Attaching embroidery bed

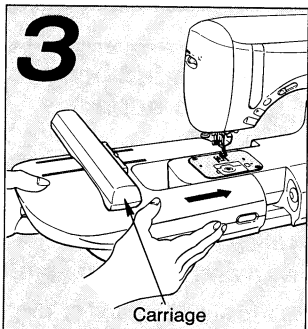
Be sure to turn power off first. Failure to do so will cause embroidery to not function.



**1** Turn power off.



**2** Slide auxiliary bed to left.

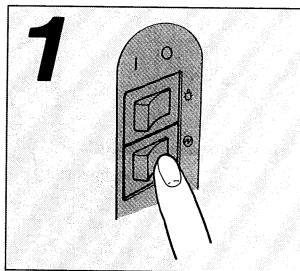


**3** Place your sewing machine on a flat surface such as a table, and install embroidery bed by sliding it to right until it clicks. If embroidery bed is not securely installed, finished shape of pattern can deform.

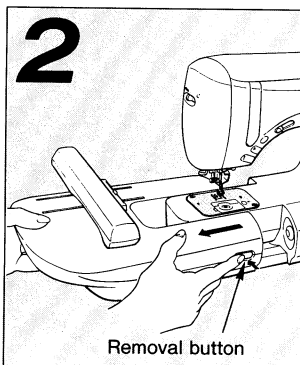
**Caution:** Do not push the carriage when installing the embroidery bed.

### Removing embroidery bed

Be sure to turn power off first. Failure to do so will cause sewing machine to not function.



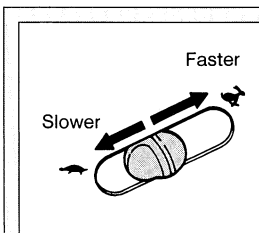
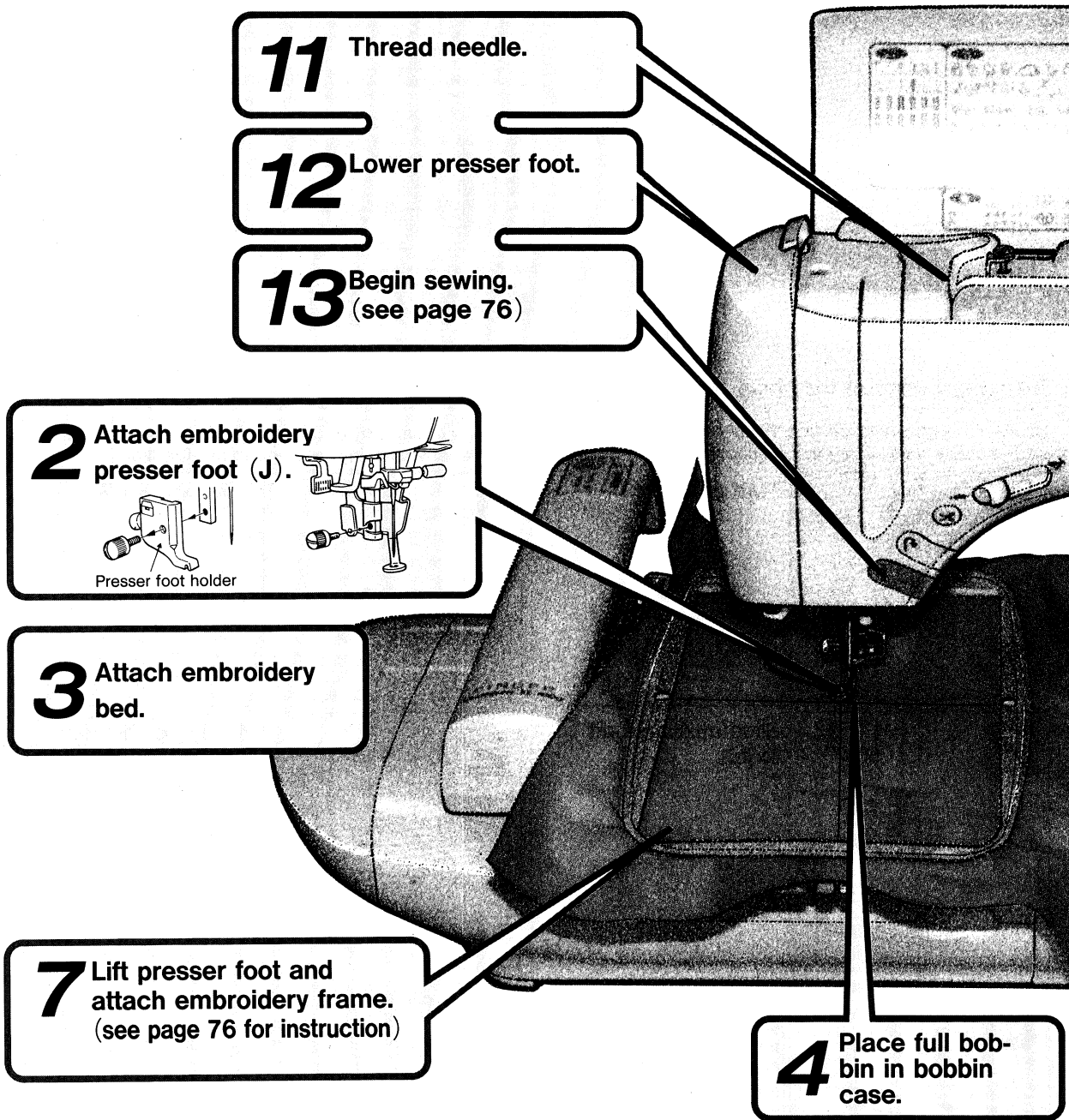
**1** Turn power off.



**2** Holding embroidery bed by left-hand side, carefully slide towards the left while pressing removal button.

**Caution:** Do not pull carriage when removing embroidery bed.

# Embroidery



## ■ Sewing speed for embroidery can be changed as follows:

Slow 450 stitches per minute (spm), medium 600 spm and Fast 750 spm.



● Remaining sewing time indicated on Touch-screen corresponds to highest speed of 750 spm.

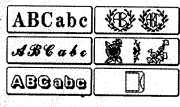

\* When using optional Embroidery cards the sewing time given in instruction sheets for embroidery card will not agree with sewing time displayed on main unit of sewing machine. Sewing time given in instruction sheet for embroidery card applies to slowest sewing speed of 450 spm.

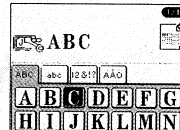
Refer to page 72 for how to select characters and patterns.



**6** Press LCD screen or  button.

**8**   Choose Combination embroidery or Multiple hoop embroidery.

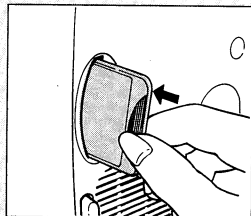
**9**  To embroider Alphabet, Monogram or Floral borders and Flowers press desired pattern category key.  
To use embroidery card (optional), insert card (see below) and press  key.

**10** Example:  Select desired alphabet sequence.

- To change location of embroidery inside embroidery frame, see page 78.
- To rotate alphabet/patterns or change size, see page 80.
- To change spacing between alphabet letters or to mirror patterns, see page 81.
- To save alphabet/patterns in memory, see page 87.
- To embroider alphabet letters or words which extend beyond one embroidery frame, see page 100.

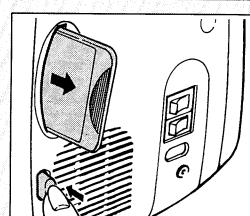
**1** Turn off power to machine. 

**5** Turn on power to machine. 



■ To install and remove optional embroidery cards.

- To install, hold card with arrow shown on it faced forward. Insert card straight into slot until it will go no further.
- To remove embroidery card, press removal button.



**NOTE:** It is not necessary to turn off power when removing or replacing card.



## Using key


It is possible to change display time of error message and setting of automatic backtack stitching or thread trimming.

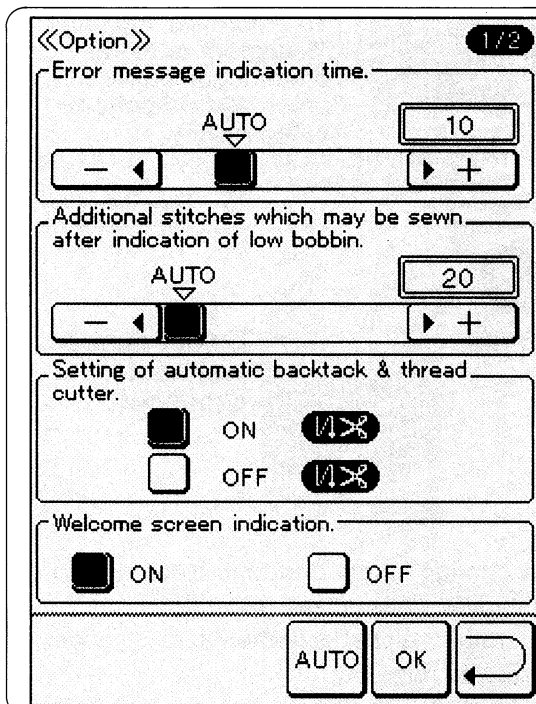
After you have changed specific items, press  key.

Then, press  key.

To restore screen to previous one, press  key.

Press  key contained in  to call up option screen.

**NOTE:** Although option touch-screen  indicates main unit, three of the option functions have a significant effect on embroidery sewing.



### Error message display time:

Length of time during which error message is displayed can be increased or decreased. (There are a number of error messages associated with embroidery)

### Setting of number of stitches machine is allowed to sew with low bobbin:

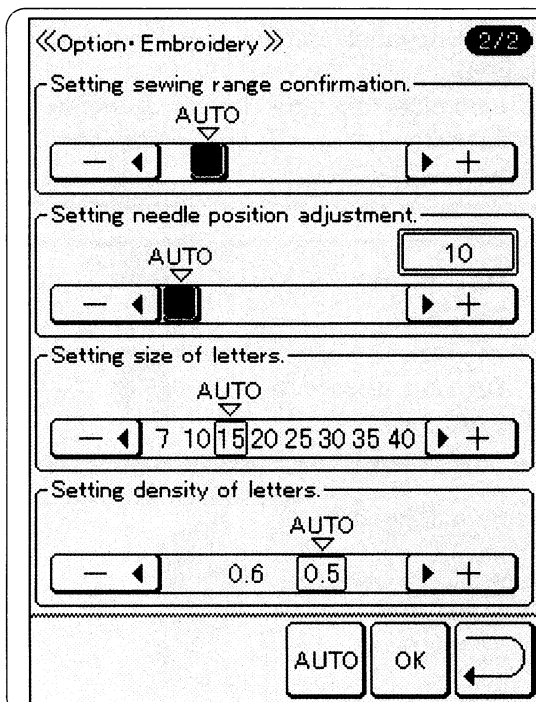
The number of stitches that can be sewn after error message "Bobbin thread supply low. Check bobbin" is displayed. (Bobbin thread supply is crucial with embroidery)

### Setting of automatic backtack stitching and thread cutter:

Whether backtacking/thread cutting is automatically specified when selecting pattern or manually specified can be selected. (This selection cannot be made when embroidery bed is installed on machine as it is always automatic).

### Welcome screen display:



It is possible to directly display carriage movement (initializing) screen by electing to not have Welcome screen greet you when power is turned on.



### Setting sewing range confirmation:

Length of time during which carriage rests at each of four corners of sewing area being confirmed can be specified. (See page 79)

### Setting of number of stitch correction increments when using broken thread "HELP" function:

The number of stitches to be skipped by pressing  or  key in the case of thread breakage, broken needle, etc to allow faster or slower positioning of needle can be adjusted (see page 85) (For the re-sewing of large pattern, exact position can be reached quickly by increasing the number of stitches to be skipped.)

### Alphabet size conversion:

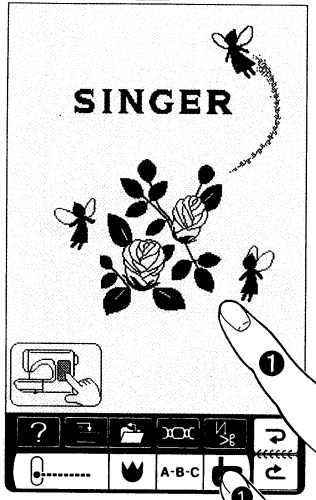
Starting size of built-in alphabet embroidery can be specified.

### Alphabet density:

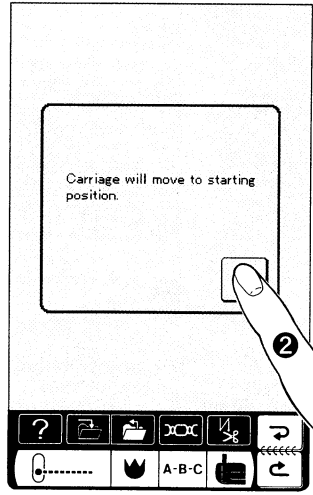
Stitching density for built-in alphabet embroidery can be specified.

## Selection/kinds of alphabet and patterns

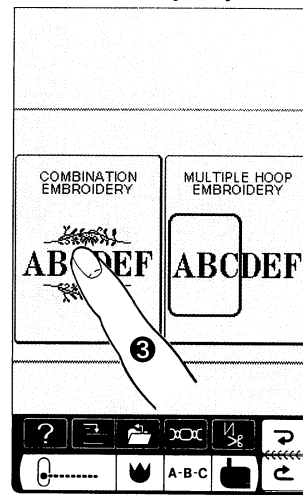
**1** Touch Welcome Screen or press  button.



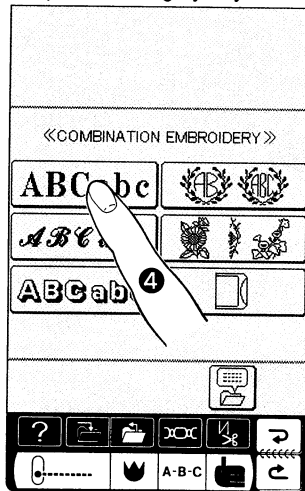
**2** Initialize embroidery unit.



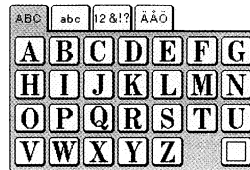
**3** Press combination embroidery key.



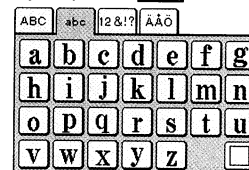
**4** Select desired alphabet pattern category key.



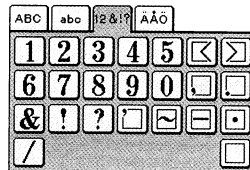
The capital letter touch-screen will appear.



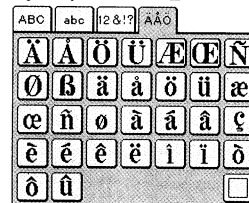
If you press .



If you press .

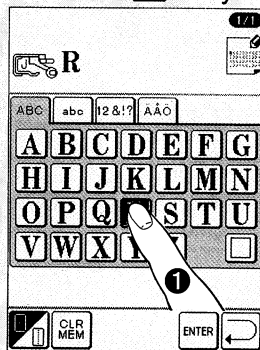


If you press .




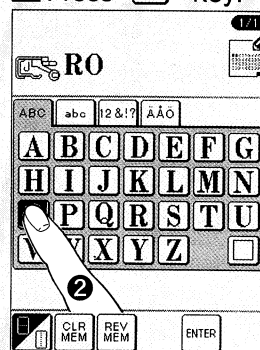
### Example: Selecting "ROSE"


**1** Press  key.

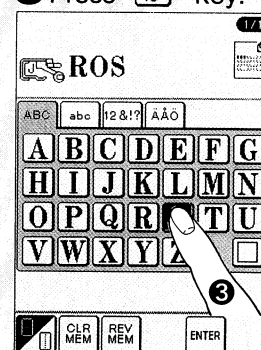


"R" appears on screen.

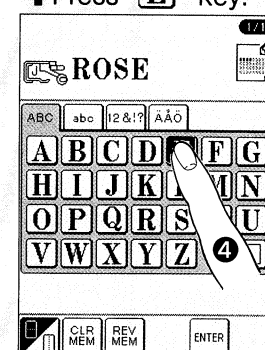
**2** Press  key.



**3** Press  key.



**4** Press  key.



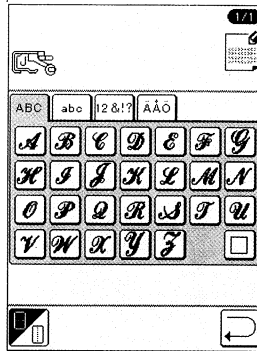
"ROSE" appears on Touch-screen.

Press  key.

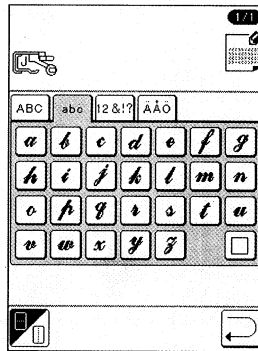


## Selecting other alphabet styles.

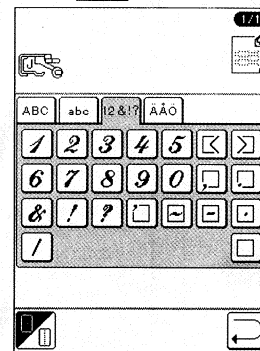
Press key.



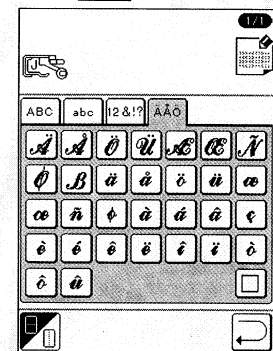
Press key.



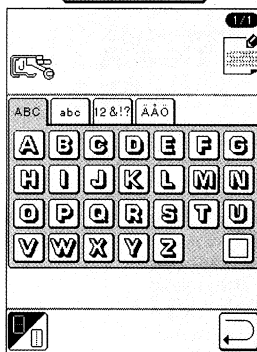
Press key.



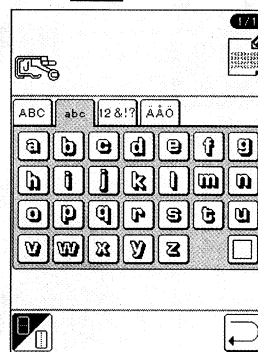
Press key.



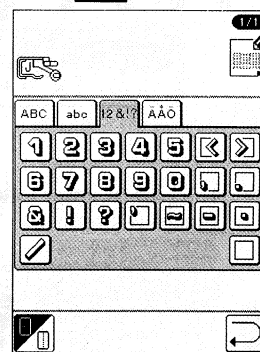
Press key.



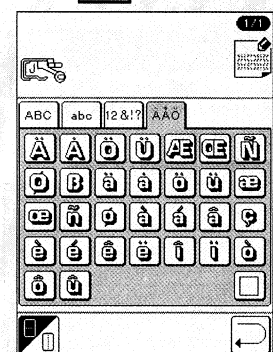
Press key.



Press key.

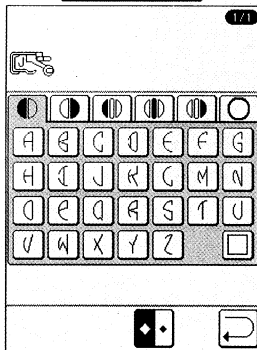


Press key.

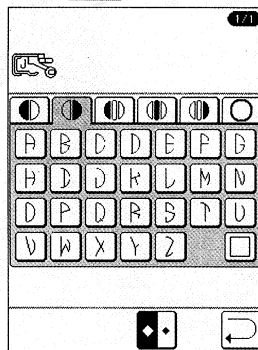


## Selecting monogram.

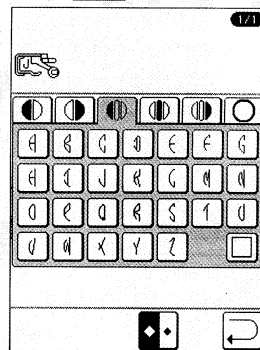
Press key.



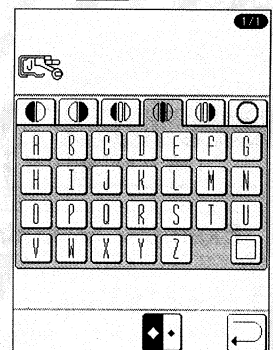
Press key.



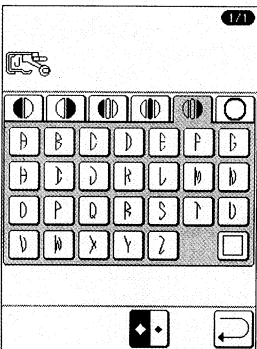
Press key.



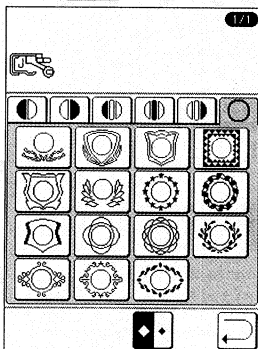
Press key.



Press key.



Press key.



Example:

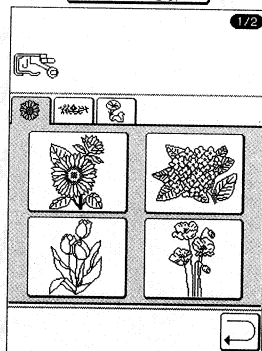
- Press .  
Select
- Press .  
Select
- Press .  
Select
- Press .
- Press key.
- Press on menu screen.
- Press .  
Select Frame Pattern.
- Press .
- Press .
- Press Start/stop button.


**NOTE:** MONOGRAM PATTERN FONTS CAN ALSO BE SELECTED AND MEMORIZED THE SAME AS OTHER ALPHABET FONTS.

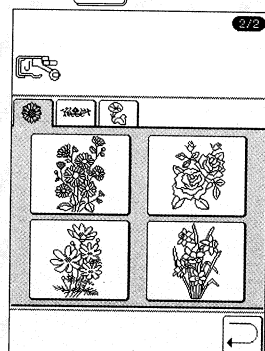



## Selecting patterns.

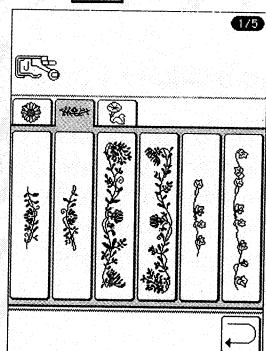
Press  key.




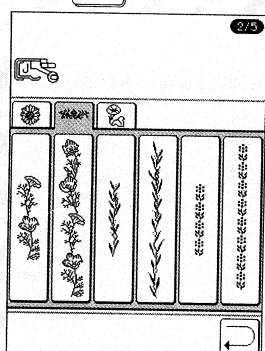
Press  key.




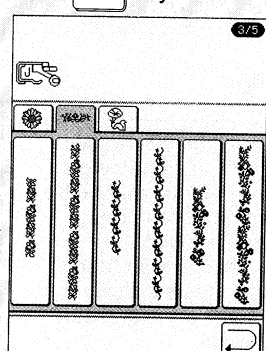
Press  key.




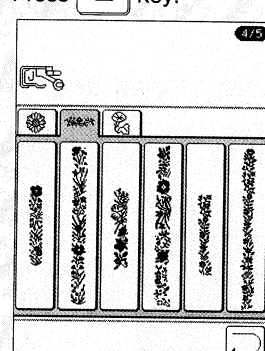
Press  key.



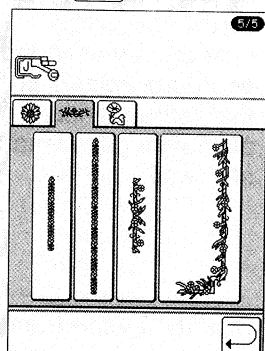
Press  key.



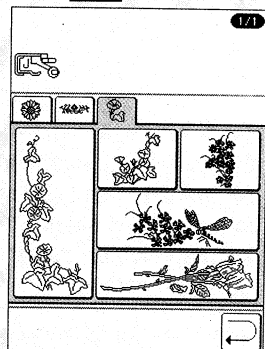
Press  key.



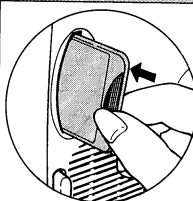
Press  key.





Press  key.



### Selecting patterns when using an Optional Embroidery Card.



1. Insert embroidery card (see page 70).
2. Press  key.
3. Patterns provided by embroidery card will appear on touch-screen.
4. View touch-screens by pressing  key.





\* A large number of optional embroidery cards are available on a broad range of topics. (see page 116)  
New topics and cards are regularly introduced so check with your Singer dealer for availability.

# Embroidery Sewing Preparation

## Foot Speed Controller

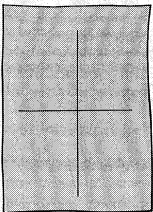
All embroidery sewing is done with start/stop button.  
Foot controller is inoperable during embroidery.

## Fabric, thread and Needle

Type of thread	Material 	To embroider difficult-to-sew materials such as light-weight materials and elastic materials, adhere a piece of temporary-sticking type of fusible interfacing (non-woven fabric), using an iron (temperature: low to medium) on wrong side of such material.
	Needle thread 	Always use good quality thread designed for sewing machine embroidery.
	Bobbin thread 	White 100% Polyester light-weight 80 to 100 weight.
Type of needle 		Singer red band style 2020 size 11/80 or size 14/90.

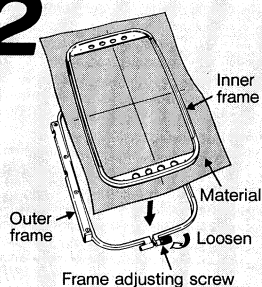
## Securing material in embroidery frame

### 1



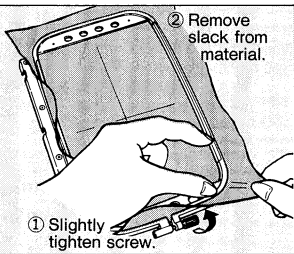
Draw marker lines on material with assistant marker. This aids in centering and squaring material in frame.

### 2



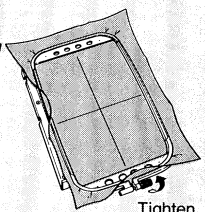
Loosen frame adjusting screw and place material between inner and outer frames so that marker lines align with raised marks on frame.

### 3



Slightly tighten frame adjusting screw and pull material edges to remove slack.

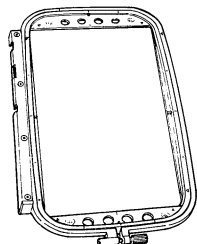
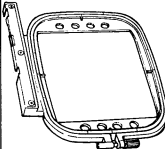
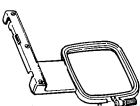
### 4



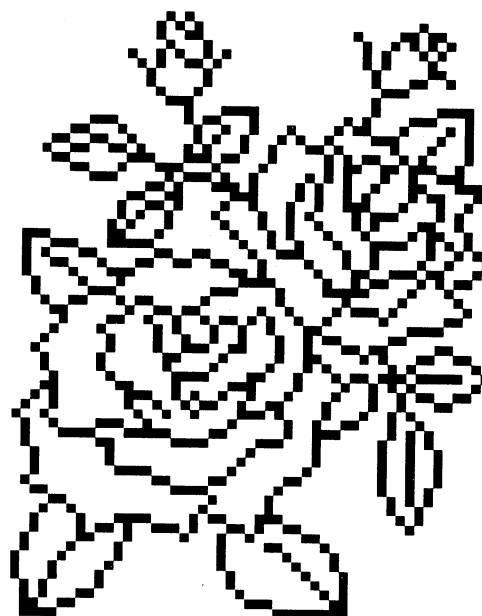
Once material is properly positioned in embroidery frame with no slack, securely tighten frame adjusting screw.

**NOTE:** Finger tighten only as over tightening may cause stripping.

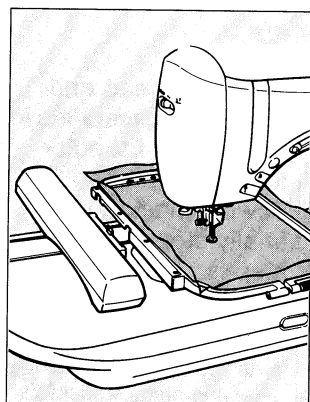
## Type of embroidery frames

Large	Medium	Small
		
●Embroidery area 24cm (length) × 13cm (width)	11.4cm (length) × 11.4cm (width)	5.5cm (length) × 5.5cm (width)
●Application: For large designs such as combination or multiple hoop embroidery.	For single patterns, etc.	For small articles (such as handkerchiefs) and name labels.

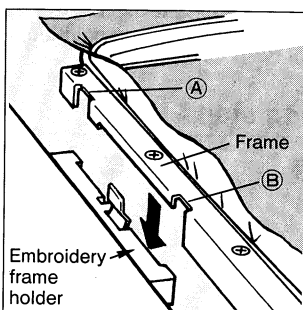
Example: To embroider



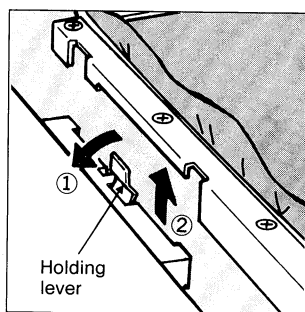
## Attaching and removing embroidery frame



Fully raise embroidery foot and place embroidery frame under it.

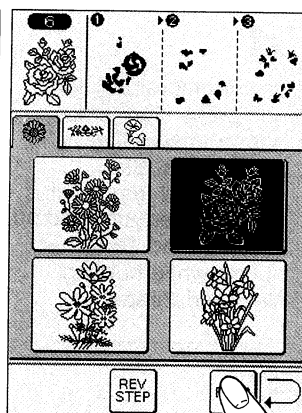


Locate embroidery frame directly over embroidery frame holder aligning notch (A) and (B) with holder. Push straight down until it clicks.



To remove embroidery frame from embroidery frame holder lift embroidery frame while pressing embroidery frame holder lever to left.

## Embroidering procedure



**1**

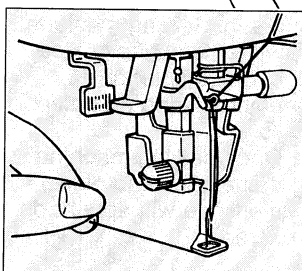
Select a pattern to be sewn.

(ROSE from )

Order of sewing (color steps) is shown at top of touch-screen.

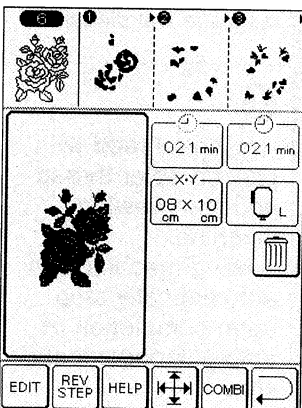
Suggested colors for the rose are shown on the front cover of the instruction book.

Press **ENTER** key.



**2**

Thread machine head with first color thread. Pass thread through hole in embroidery foot, and lightly hold slightly slackened thread with left hand.



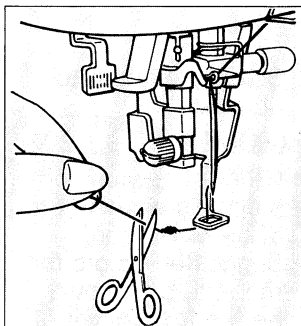
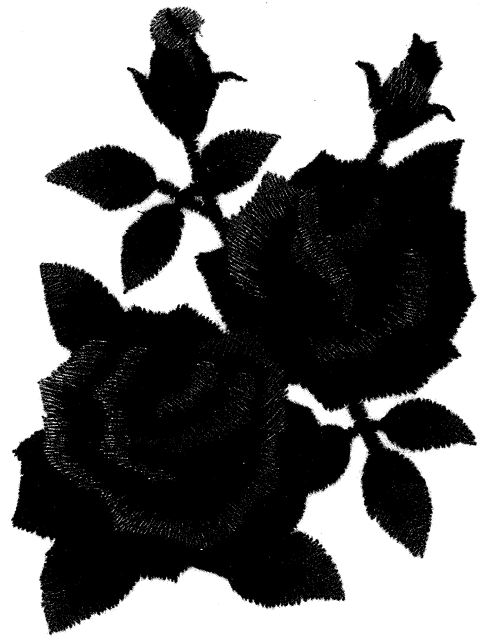
**3**

Note embroidery information shown on to touch-screen.


Time remaining current sewing step  
size of pattern

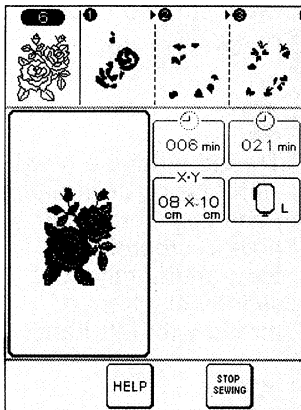
Time remaining for entire pattern  
frame installed

**Note:** Time will only show when sewing at 750 spm.



**4**


Lower embroidery foot and press start/stop button to sew five or six stitches. Stop sewing and trim surplus thread. Alternate method: Press thread cutter  button while holding slackend thread.

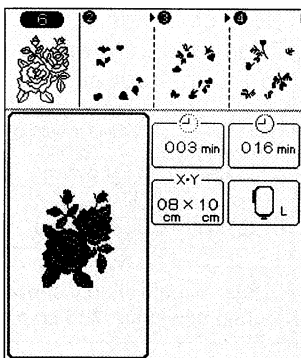


**5**

Start sewing machine again. Sewing machine will automatically stop upon completion of embroidering first step.

Once sewing machine completes embroidery, message will appear on screen.

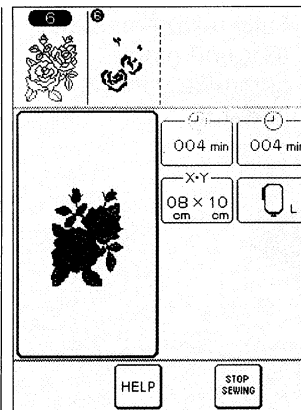
Press  key, and message will disappear.



**6**

Replace thread with second color thread and start sewing machine. Sewing machine will automatically stop upon completion of embroidering second step.

Sewing machine will automatically stop upon completion of embroidering second step.

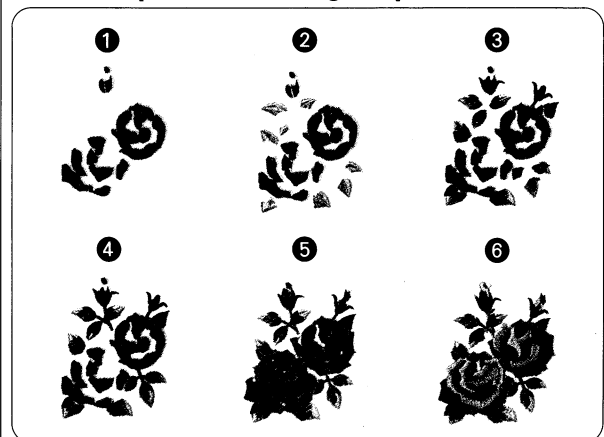


**7**

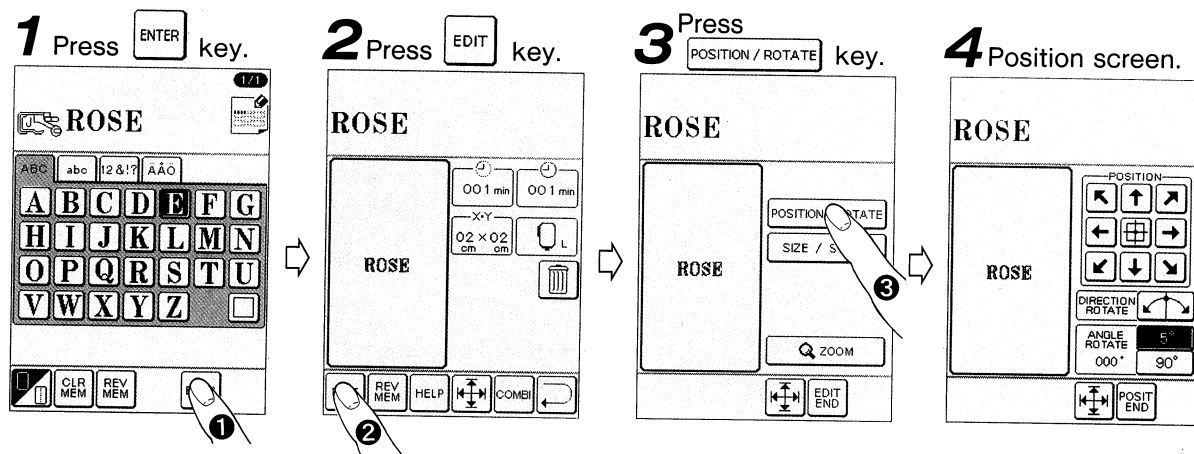
Replace thread and start sewing machine in similar way for color threads 3 through 6. Sewing machine will finally stop after sixth step is completed. Initial screen will be restored on LCD.

\* As you sew each step the sewing steps will scroll so next step is always in the leftmost position.

### Order of pattern sewing steps



## To determine location of embroidery of name, word or pattern



## To change location of embroider

**ROSE**

Press any of the eight arrow keys. The word or pattern will move in direction arrow points.

Press key, and location of embroidery will return to center of embroidering area.

Press key, and embroidery pattern will rotate clockwise/counterclockwise. First determine degree angle of rotation. Then rotate embroidery pattern. Pressing will rotate pattern counterclockwise. Pressing will rotate pattern clockwise.

ANGLE ROTATE 000° 5° ...Turns pattern in increments of 5 degrees.  
 000° 90° ...Turns pattern in increments of 90 degrees.

As you rotate pattern the degree of rotation will show on screen.

Press range key , and frame will move, stopping at 4 corners, to show embroidery area. The angle of rotation is finalized press key.

**1** Press key.

\* Touch key once and frame will move one increment. Hold finger on key and frame will move quickly.

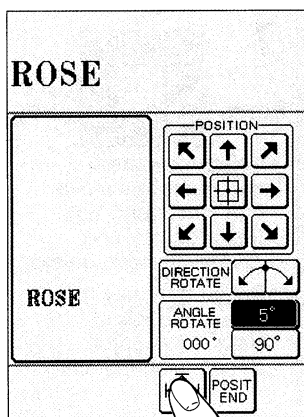
\* Press key to move location of pattern to center of embroidering area.


**2** Upon completion of moving pattern press key.

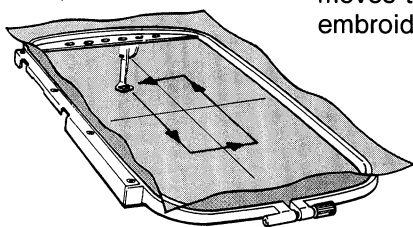
**3** Press key to restore previous touch-screen.

**Caution:** Do not lower presser foot or needle while using range key or positioning arrows.

## To confirm location of embroidery



Press  key.

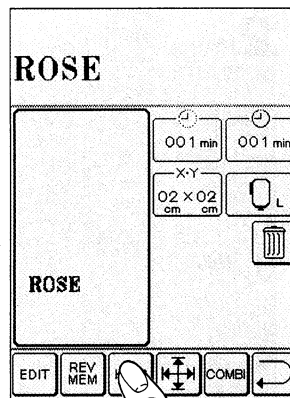



Embroidery frame moves to indicate embroidering area.

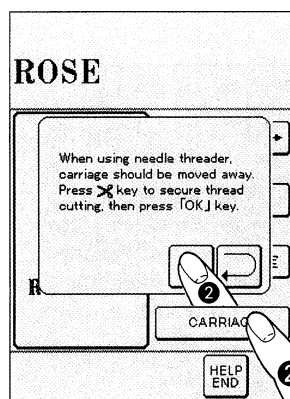
**Caution:** Do not lower presser foot or needle while using range key or positioning arrows.



## For easier threading

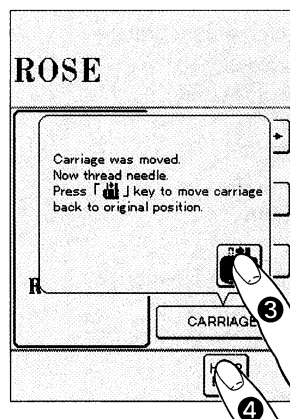
If thread breaks during sewing, shift carriage away from needle for easier needle threading.




**1**  
Press  key.



**2**  
Press  key first, then press .



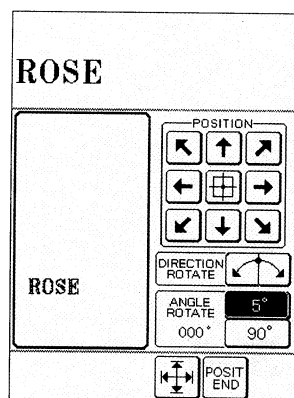
**3,4**  
Once needle is threaded, press  key.

\* Press  key to return to sewing touch-screen.

# Rotating names, words or patterns and changing size

Built-in alphabets may be changed in size as desired.

## To rotate patterns

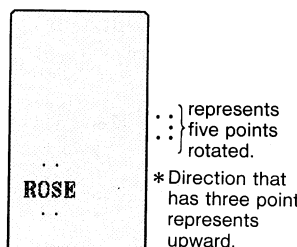


See page 77 for how to call up this touch-screen.

**1**

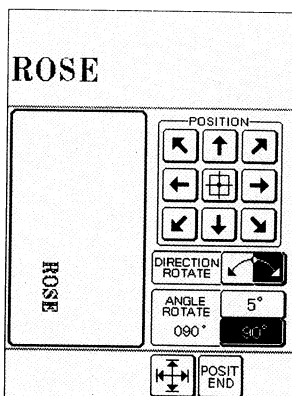
Select angle of rotation.

Angle of rotation may be selected from **5°** and **90°** by pressing key. When **90°** is pressed, pattern rotates in increments of 5 degrees. When **5°** is pressed, pattern rotates in increments of 90 degrees.



**2**

Pattern will rotate counterclockwise when ☒ side of direction key is pressed, or it will rotate clockwise when ☐ side of direction key is pressed.



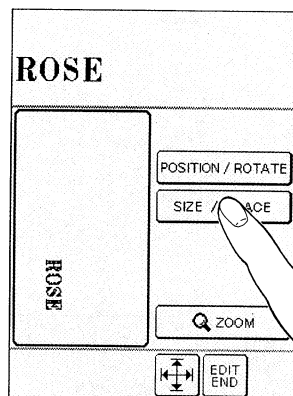
**3**

Example: To rotate pattern by 90 degrees

1. Press **90°**.
2. Press ☒ clockwise key.

Upon completion of pattern rotation, press **POSIT END** key.

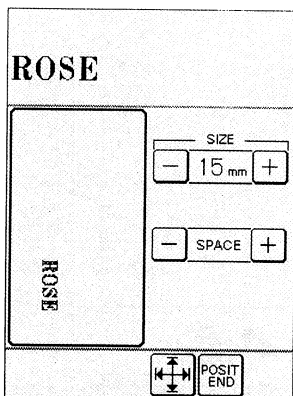
## To change size of alphabet



See page 77 for how to call up this touch-screen.

**1**

Press **SIZE / SPACE** key.



**2**

Press ☐ key to reduce size of letter or word; ☒ key to enlarge it.

Every press on key will change size of letter or word. Built-in alphabet changes in eight different steps; 7, 10, 15, 20, 25, 30, 35 and 40mm)

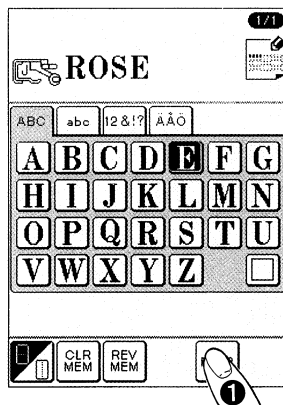
- \* Word enlargement limit varies depending on length of word or phrase and specific letters.
- \* Some words can be enlarged beyond the limit when rotated 90 degrees.
- \* Words shifted to edge of embroidering area can be enlarged beyond the limit when returned to center of area.

**3**

Upon completion of adjustment, press **POSIT END** key.

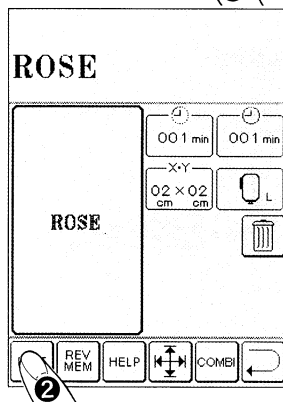
## To change alphabet spacing

Built-in alphabet spacing can be increased/ decreased within boundary of embroidery frame.

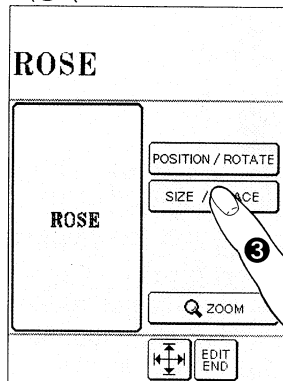


**1**  
Select alphabet letters to spell word.

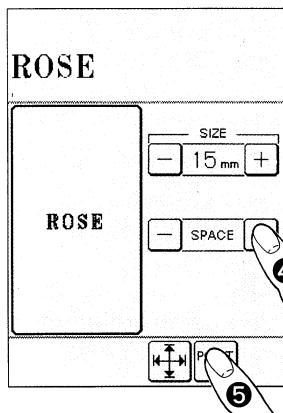
Upon completion of letter selection, press **ENTER** key.



**2**  
Press **EDIT** key.



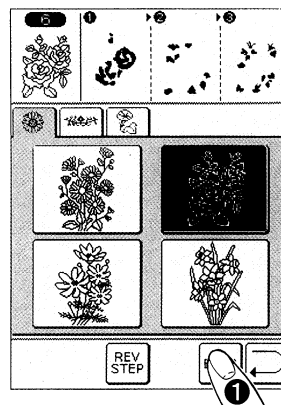
**3**  
Press **SIZE / SPACE** key.



**4,5**  
With **[- SPACE +]** key, press **[-]** to decrease spacing between letters  
**+** to increase spacing between letters.

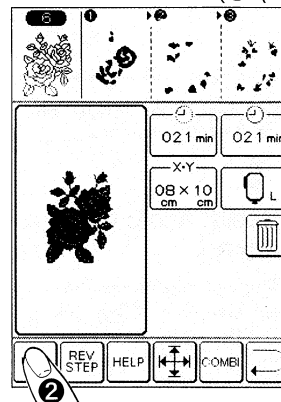
Upon completion of alphabet space changing procedure, press **POSIT END** key.

## How to use Mirror key

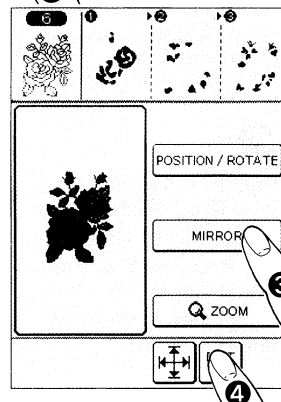


**1**  
Select pattern.

Upon completion of pattern selection, press **ENTER** key.



**2**  
Press **EDIT** key.



**3,4**  
Press **MIRROR** key.

Upon completion of pattern mirror procedure, press **EDIT END** key.

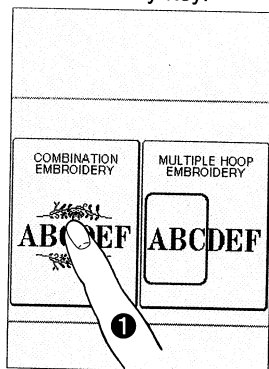


# Embroidering a combination of a word and pattern

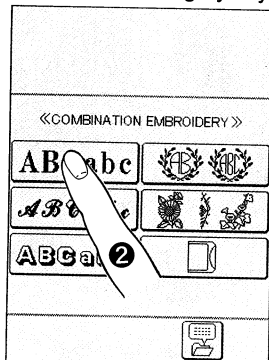


Example:

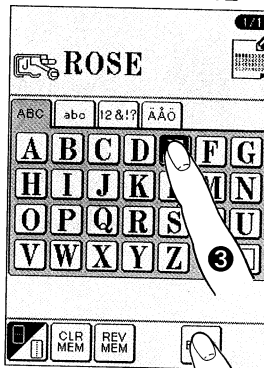
**1** Press combination embroidery key.



**2** Press selected alphabet category key.

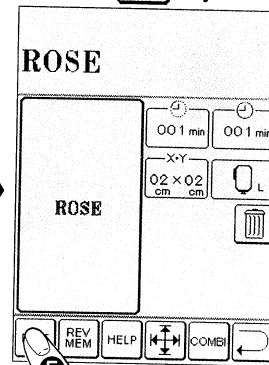


**3,4** Select alphabet letters and enter the word "ROSE".

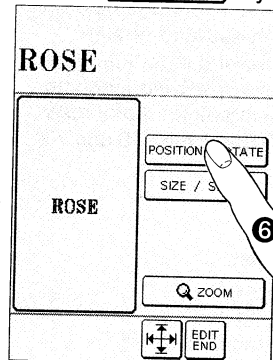


Press **ENTER** key.

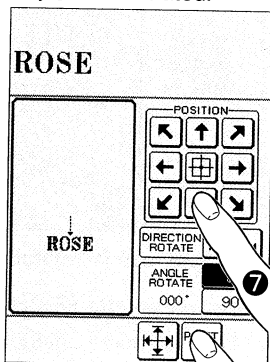
**5** Press **EDIT** key.



**6** Press **POSITION / ROTATE** key.

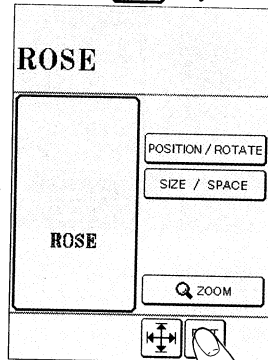


**7,8** Move "ROSE" as illustrated.

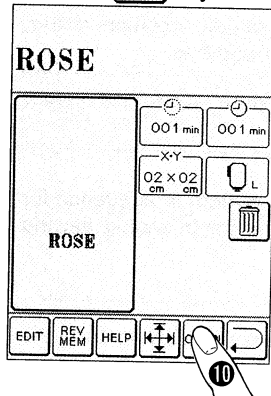


Press **POSIT** key.

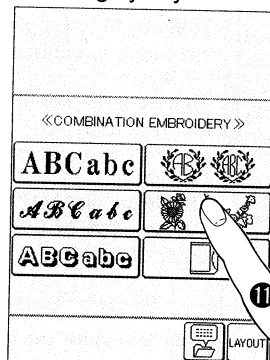
**9** Press **EDIT END** key.



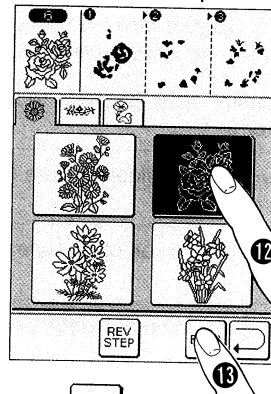
**10** Press **COMBI** key.



**11** Press floral pattern category key.

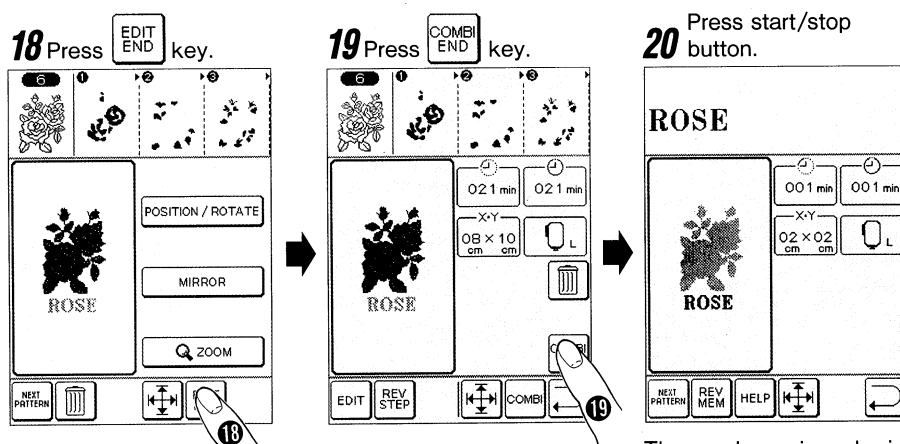
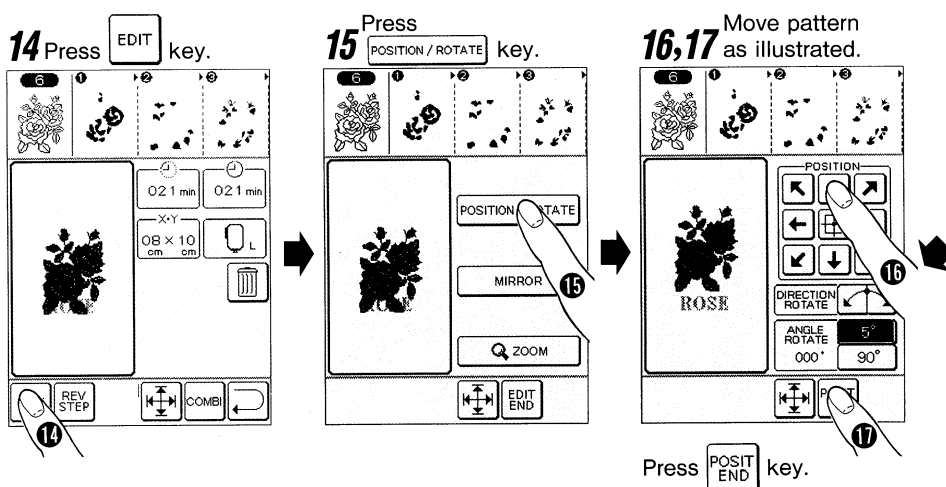


**12,13** Press rose pattern.



Press **ENTER** key.

next page ➡



When sewing machine stops, change color of thread and re-start sewing machine. Now, sewing machine embroiders floral rose. (See pages 76 and 77)

\* To edit word "ROSE", press **NEXT PATTERN** key.  
In this case touch-screen will change from the floral rose to the word "rose".

The word rose is embroidered first.

\* To sew pattern first, press **NEXT PATTERN** key.  
Then, selected category of embroidery will change from the word rose to floral rose.

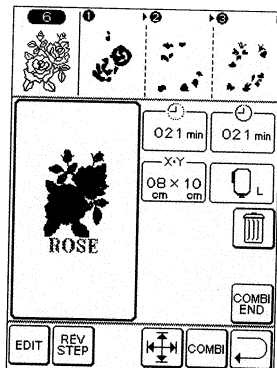
### Function of displays on screen

	This key is used to change orientation of alphabet from X axis(portrait) to Y axis(landscape).		This key is used to clear patterns that have been memorized.
	This key is used to confirm alphabet letters when there are more letters in memory than can show on one screen.		This key is to be pressed to edit (position, rotate, size, space, mirror, zoom) patterns.
	This key is used to confirm order of steps to be used to embroider pattern.		This key is used to restore screen to layout touch-screen.
	This key is used to confirm embroidering area by moving embroidery frame.		This key changes to next pattern in sequence for the purpose of editing and for changing sewing order of patterns.
	This key is to be pressed before selecting second pattern.		This key may be used prior to sewing to make threading easier or to change sewing order (steps). It may also be used in the event of thread breakage to reposition frame.
	This key is used to delete memory data or a specific pattern.		

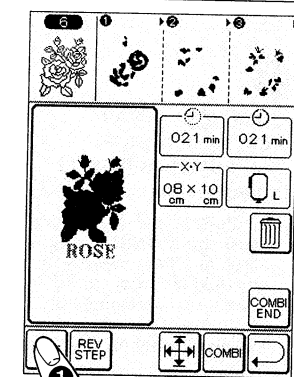
## Zoom (enlarging) function

For combined embroidery, alphabet and patterns may be placed so close that they overlap one another. For combination or multiple hoop embroidery alphabet and patterns may be neatly joined. In this case, zoom function is used to enlarge portion you want to visually check on the touch-screen.

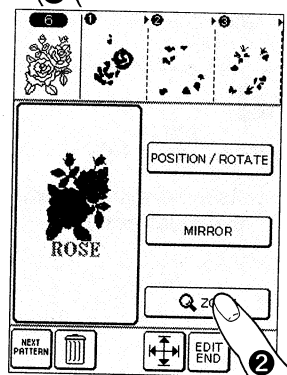
\* If pattern is enlarged on touch-screen, size of pattern or alphabet to be embroidered on material will not change.



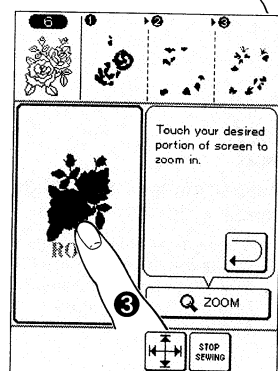
**Example:** Checking whether or not "SE" overlaps rose leaf.



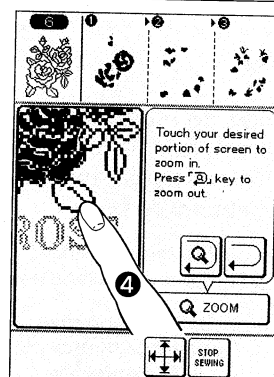
**1**  
Press **EDIT** key.



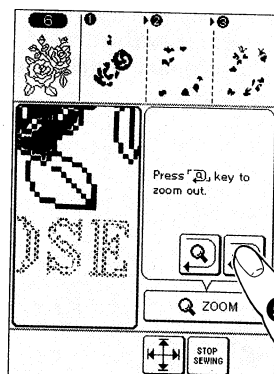
**2**  
Press **Q ZOOM** key.



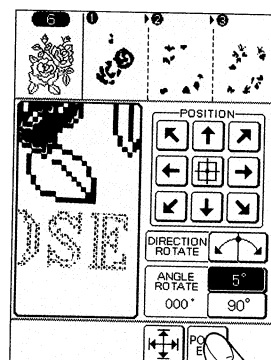
**3**  
Touch portion of screen you want to enlarge and visually check.



**4**  
If you want to further zoom in, press same portion again.

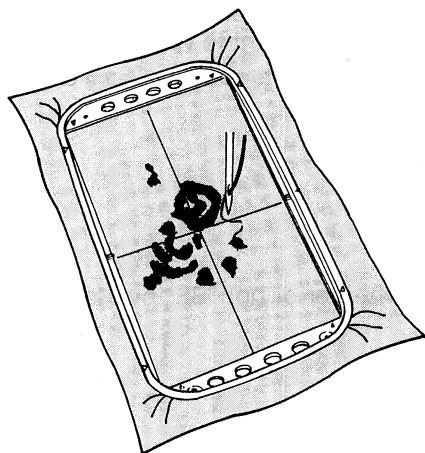


**5**  
To change position or size of enlarged portion of pattern, press **POSITION / ROTATE** key. This will bring up positioning key which will allow positioning while area is enlarged. If positioning adjustment is not required press **Q ZOOM** to zoom out and return to previous touch-screen.

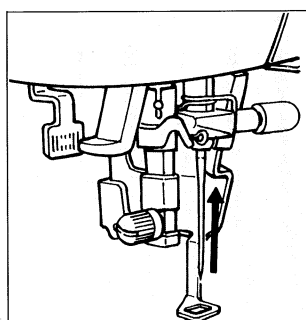


**6**  
After completing position or angle adjustment press **POSIT END** Key.

## If thread breaks during embroidering



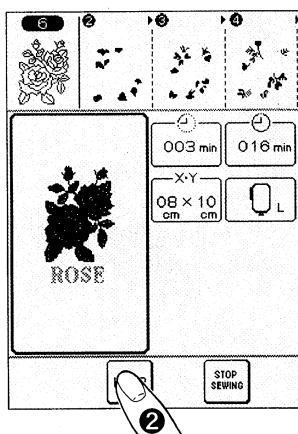
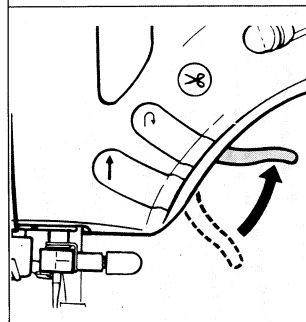
To embroider interrupted pattern from point at which thread has broken:



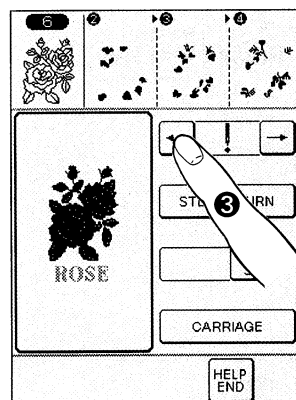
**1**  
Sewing machine will automatically stop.  
Raise needle and raise embroidery foot.

If needle thread broke:  
● Re-thread machine head.

If bobbin thread broke.  
① Cut needle thread and remove embroidery frame from machine.  
② Re-set bobbin thread and re-attach embroidery frame.



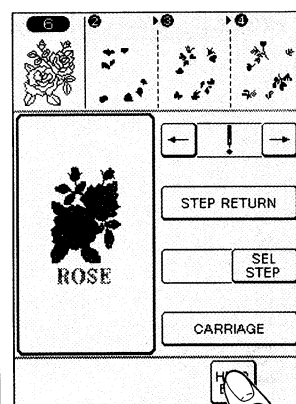
**2**  
Press **HELP** key.



**3**  
Press **STEP RETURN** key to back up to a point 2 to 3 stitches beyond broken point.

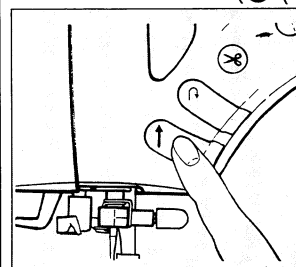
\* Single-touch of **STEP RETURN** key will allow you to back up one stitch at a time. Keep **STEP RETURN** key held pressed, you can back up in increments of 10 stitches after six individual stitches are taken.

\* If you go back too far, press **HELP END** key to return to desired point.



**4**  
Press **HELP END** key.

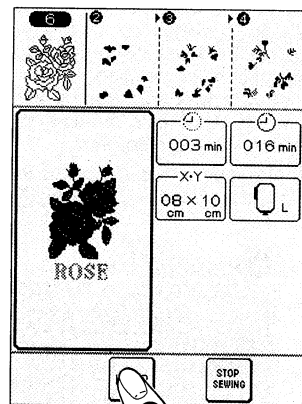
\* Machine will return to sew touch-screen.



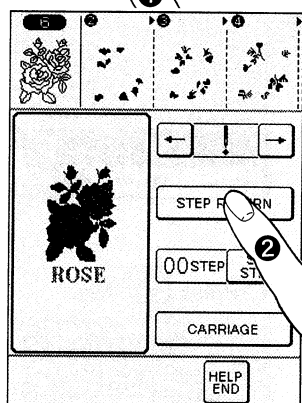
**5**  
Lower embroidery foot and press start/stop button.

\* Draw thread remaining at beginning of embroidery out to wrong side of material, secure it by making knot and trim excess.

## To re-embroider from start of interrupted pattern:

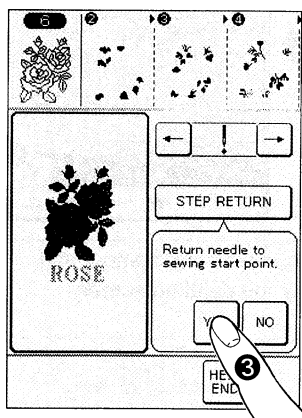


**1**  
Press **HELP** key.

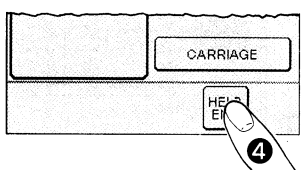


**2**  
Press **STEP RETURN** key.

\* Embroidery frame travels to align needle with start position of step that is embroidered with current thread.



**3**  
Press **YES** key.



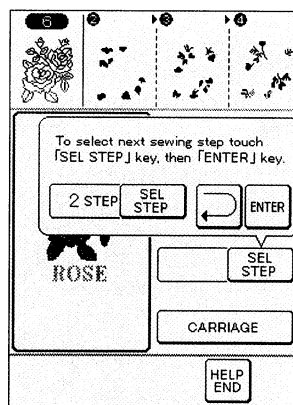
**4**  
On next screen, press **HELP END** key.

**5**  
Lower embroidery foot and start your machine.

## To re-embroider with specific designated step:

Press **SEL STEP** key to designate step you wish to sew next. After selecting next step press **ENTER** key. Selected step will be embroidered.

### Example:

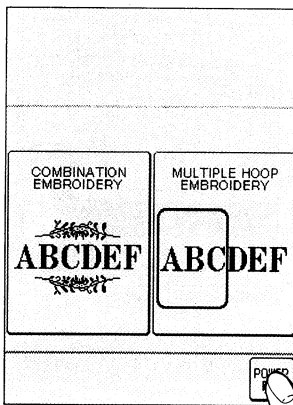


To embroider only step, press **SEL STEP** key twice to show **2 STEP** **SEL STEP**

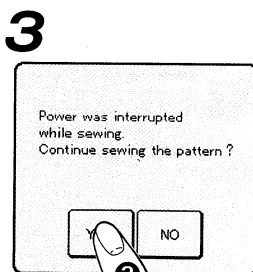
When desired step is entered you may lower embroidery foot and press start/stop button.

## To embroider subsequent step of pattern after turning power off (once):

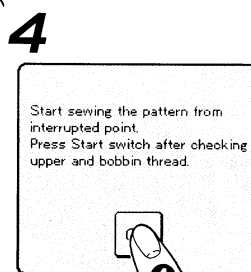
**1** Turn power on and press Welcome screen, move carriage as instructed... (see page 72).



**2**  
Press **POWER FAIL** key.  
In the event of power failure during processing (⌚ appears) there is a possibility that the data on layout screen will be lost even if **POWER FAIL** key is pressed.





Press **YES** key.



Press **OK** key, and subsequent part of pattern will be embroidered.

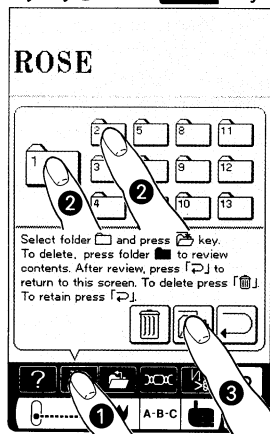
# Saving combination alphabet and patterns in long term files




How to use  and  keys

It is possible to save names, words and patterns frequently embroidered in long term files. As many as 40 names/words can be saved at a time.


## Filing in long term memory

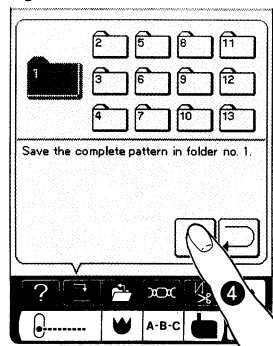
1,2,3 Press  key.





② Select file folder.  
If you select , all data is saved.  
If you select , all constant elements are saved in a brief form. In either case, when pattern is recalled, sewing will be the same.  
\* Save pattern provided by scanner card or computer card in .

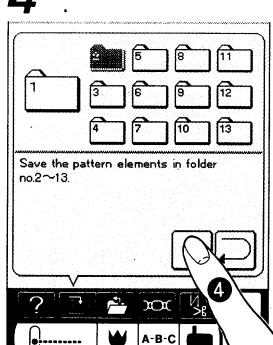
③ Press  key.


4 When you select  1



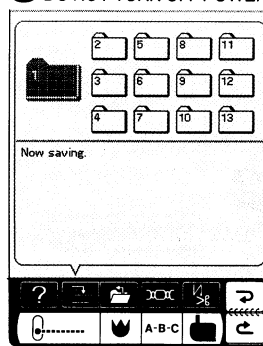
Press  key.


4 When you select  2~13

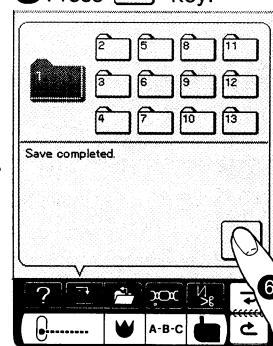


Press  key.

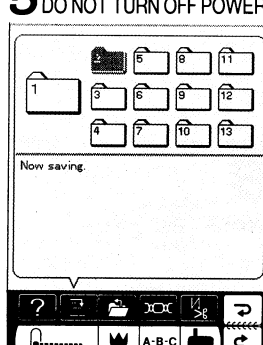
5 Wait: Caution  
DO NOT TURN OFF POWER.



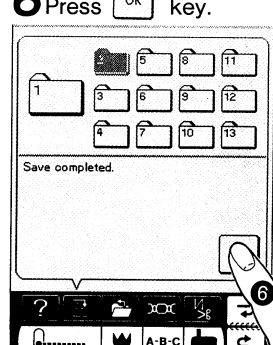
6 Press  key.




5 Wait: Caution  
DO NOT TURN OFF POWER.



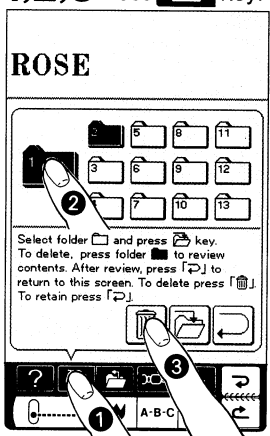
6 Press  key.




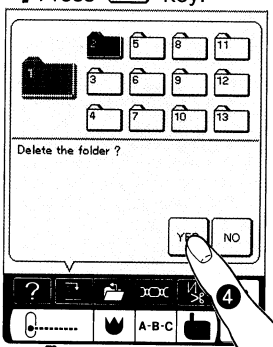
**NOTE:** When no patterns are in working memory and  is pressed, only the deleting screen will be indicated.

## Deleting long term memory

1,2,3 Press  key.



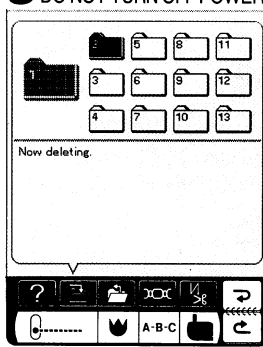
4 Press  key.




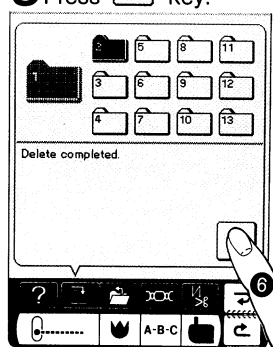
Press  (  ) key, and alphabet/pattern data stored in file will be displayed.

Press  key on screen, and screen will be restored to file screen.

5 Wait: Caution  
DO NOT TURN OFF POWER.

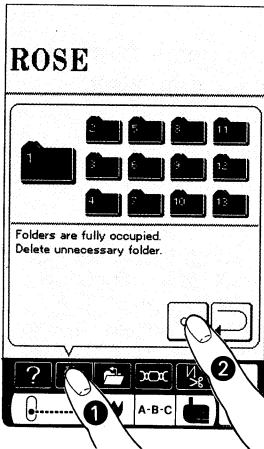


6 Press  key.



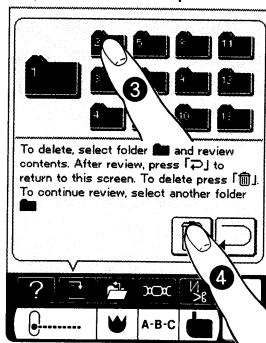
## Filling in long term memory when all files are fully occupied:

**1,2** Follow instructions.



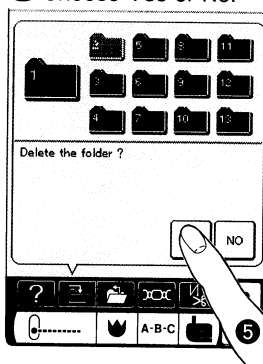
- ① Press key.
- ② Press key.

**3,4** Follow sequence.

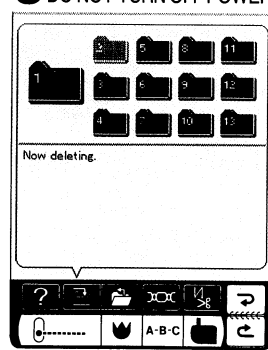


- ③ Press selectsd to delete.
- ④ Press key.

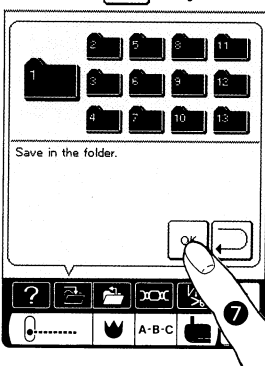
**5** Choose Yes or No.



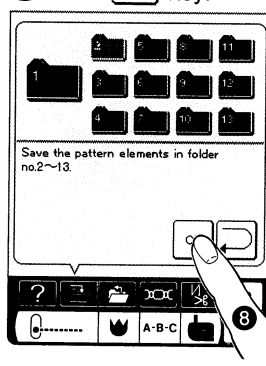
**6** Wait: Caution  
DO NOT TURN OFF POWER.



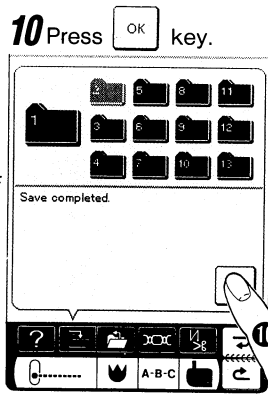
**7** Press key.



**8** Press key.



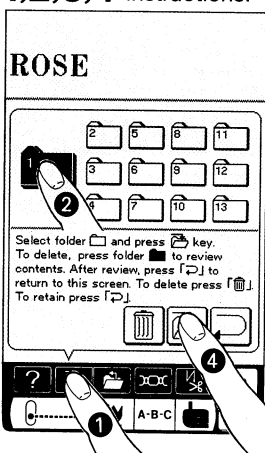
**9** Wait:  
Caution  
DO NOT  
TURN OFF  
POWER.



- \* Press ( ) key, and alphabet/pattern data stored in file will be displayed.
- Press key on screen, and screen will be restored to file screen.

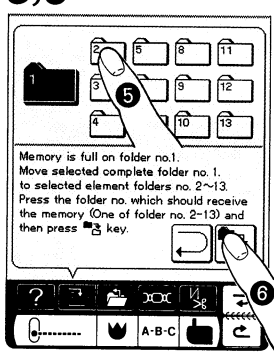
## Filling in long term complete memory file #1 when it is already occupied (move):

**1,2,3,4** Follow instructions.



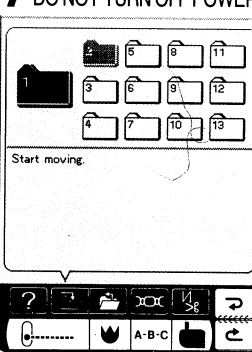
- ① Press key.
- ② Press key. (date currently in file #1 will be displayed.)
- ③ If you wish to move this file press .
- ④ Press file.

**5,6**

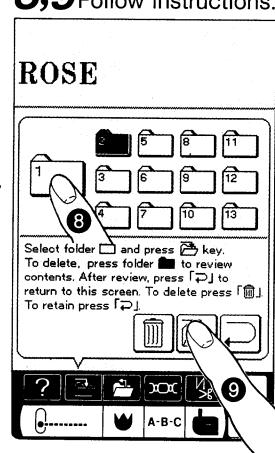


- ⑤ Press vacant file key .
- ⑥ Press key.

**7** Wait: Caution  
DO NOT TURN OFF POWER.







**8,9** Follow instructions.

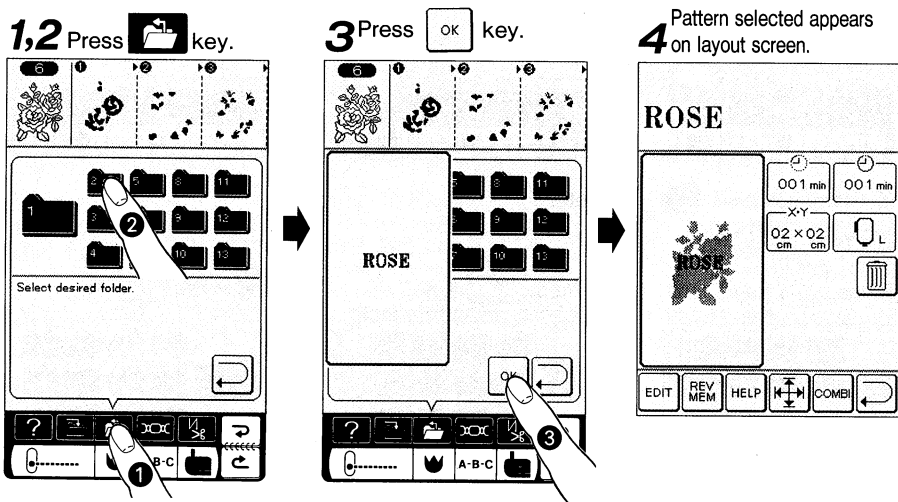






- ⑧ Press file key.
- ⑨ Press file key. (If more instruction is required refer to page 87)


## To recall word or pattern sequence from long term memory file:

Recalling method from layout screen and that from pattern menu screen are different.  
Recall word/pattern data in file under mode in which they have been saved;  
i.e., call up data (  ,  ) saved under "combination embroidery" mode under that mode  
and those (  ,  ) saved under "multiple hoop embroidery" mode under that mode.

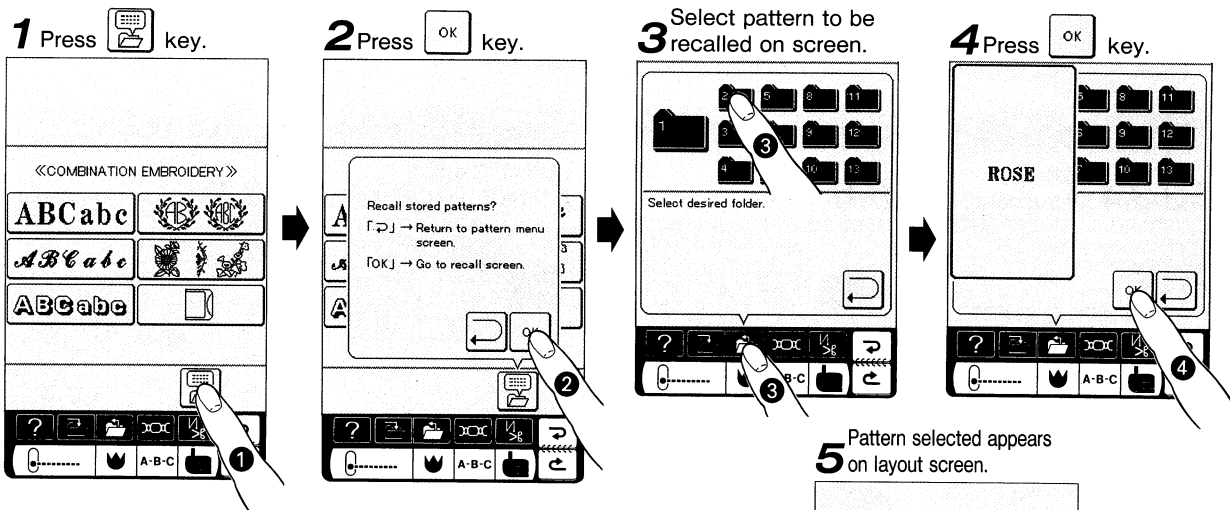
### From layout screen



- \* 1. Pattern that is recalled from  cannot be saved again in  if it is modified. (It can be saved in .)
- \* 2. Once you modify scanner or PC card pattern recalled from , it cannot be saved again there unless file is deleted and new (modified) Pattern is entered as new pattern. (see page 88)

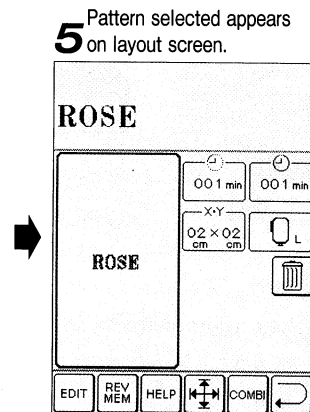
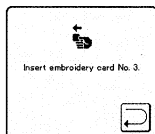
Press selected  to be recalled.

### For pattern menu screen



### If pattern provided by card is saved

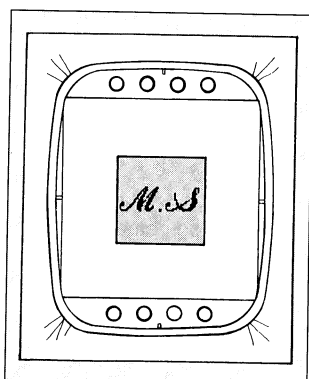
If you call up pattern designed with embroidery card that you have saved in file.  
(Example)  
Folders 2~13, a message requesting you to load card will appear on screen. Load card with machine energized, and selected pattern will appear on screen.



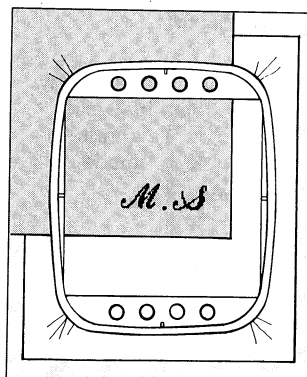


## To embroider small material or edge of material:

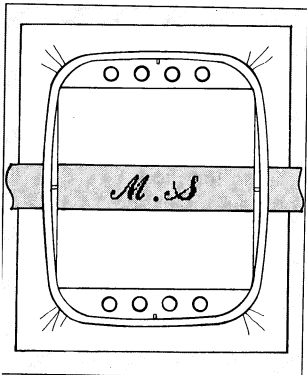
Adhere a piece of temporary-sticking type fusible interfacing (non-woven fabric) to wrong side of material. Remove interfacing after embroidery. When adhering, heat iron to low to medium temperature.



\* To embroider small material:



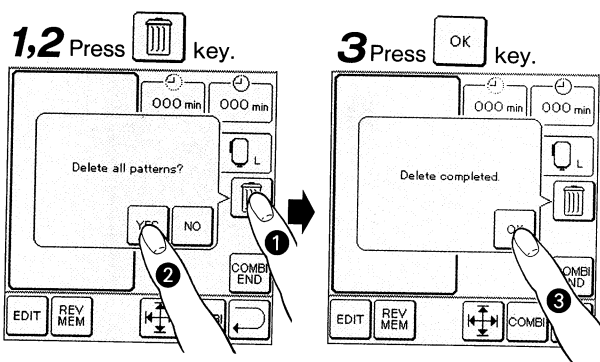
\* To embroider corner of material such as handkerchief:



\* To embroider narrow material such as ribbon tape:

## To delete pattern or cancel embroidery:

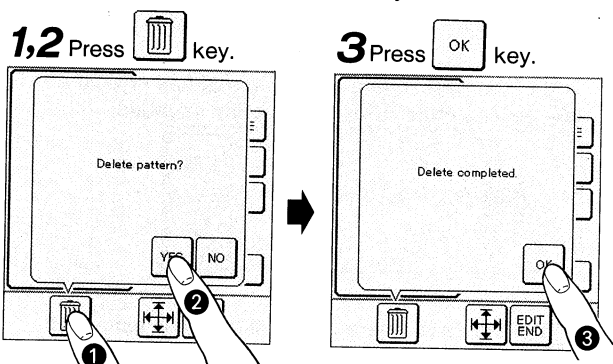
To totally delete embroidery pattern from layout screen:



Press YES key.

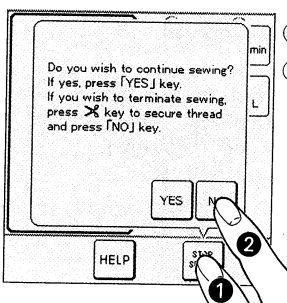
All pattern data is now deleted.

To delete only selected pattern from among combination/multiple hoop embroidery:



Press YES key.

To cancel embroidering during sewing process:



① Press STOP key.

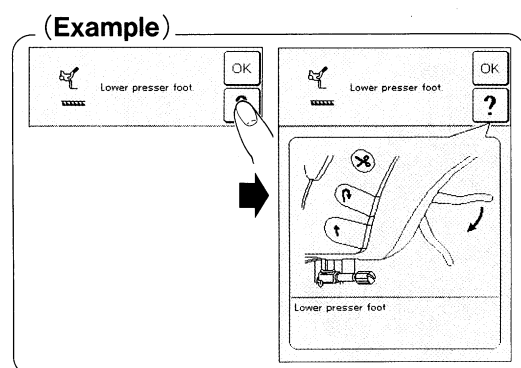
② Press NO key to cancel sewing and return touch-screen to layout.

# Listing of helpful messages

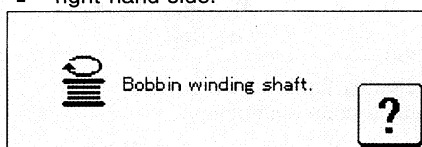
The following procedures will be displayed on screen during embroidery process when your machine is not properly set or you have operated your machine wrong.

Press **OK** key located upper right of screen or correct problem displayed, and initial touch-screen will return.

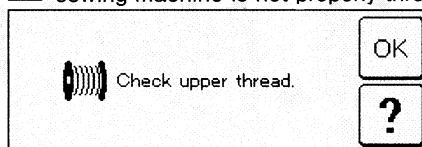
Press **?** key if you are not familiar with correction to be taken, and brief explanation of operation will be displayed.



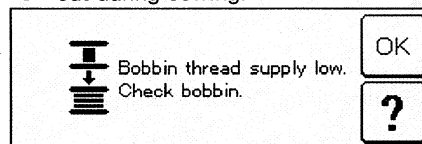
- 1 In the case where bobbin winder shaft is set to right-hand side.



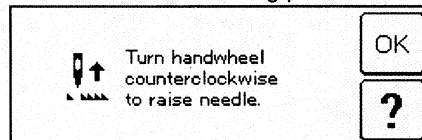
- 2 In the case where needle thread has run out or sewing machine is not properly threaded.



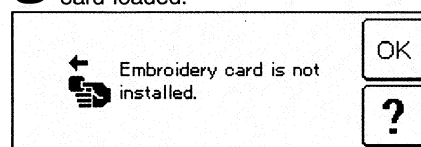
- 3 In the case where bobbin thread has almost run out during sewing.



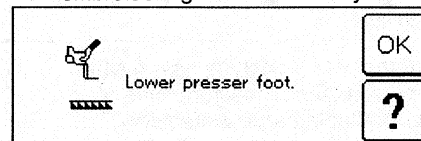
- 4 In the case where needle is in or too close to material when editing pattern data (rotate, move, etc).



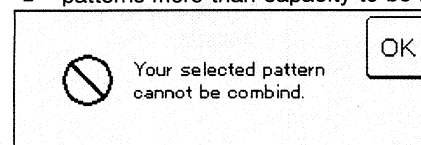
- 5 In the case where is pressed with no card loaded.



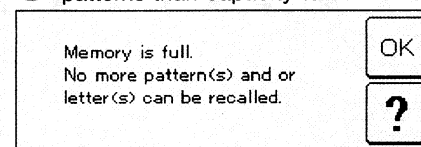
- 6 In the case where you have tried to start embroidering with embroidery foot raised.



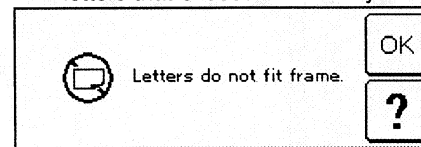
- 7 In the case where you have tried to combine patterns more than capacity to be memorized.



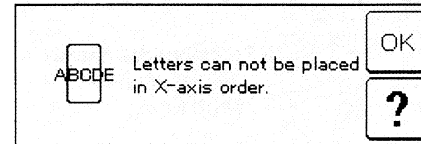
- 8 In case where you have tried to combine more patterns than capacity to be memorized or In the case where you have saved 40 patterns already.



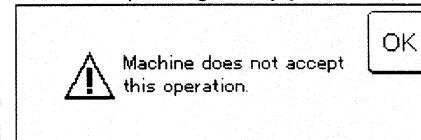
- 9 In the case where you have designated so many letters that exceed embroidery frame in X-axis (portrait) mode.



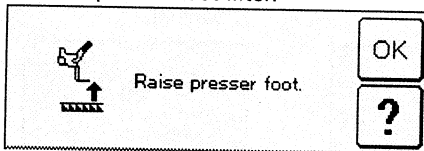
- 10 In the case where you have designated, under Y-axis (landscape) mode an amount of letters that fit the frame under landscape mode, and pressed X-axis (portrait) mode.



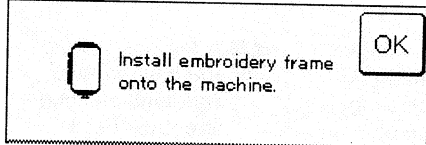
- 11 In the case where there is no function corresponding to key you have pressed.



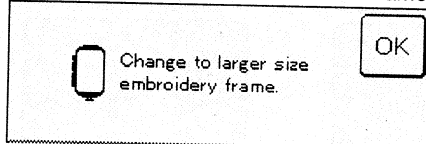
**12** Lift presser foot lifter.



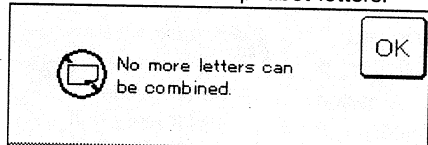
**13** In the case where you attempt to sew or perform a function before frame is installed.



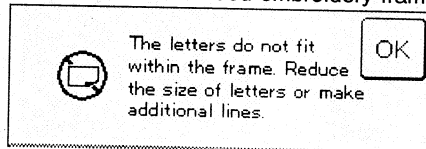
**14** In the case where pattern designated cannot be embroidered with installed frame.



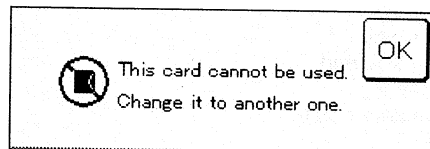
**15** In the case where you have tried to combine over 14 lines of alphabet letters.



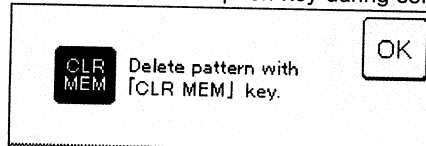
**16** In case where you have designated so many letters that exceed embroidery frame.



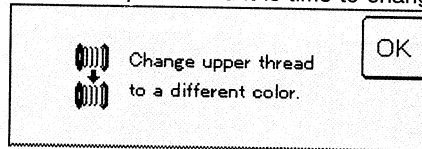
**17** In the case where something is wrong with card.



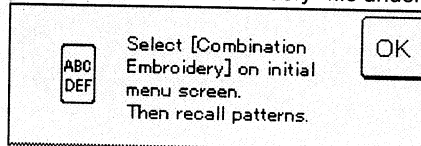
**18** In the case where you have tried to increase size of letters with option key during selecting letters,



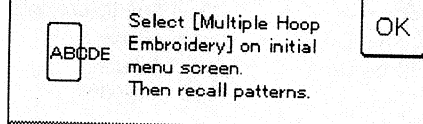
**19** In the case where step of multi-color pattern is completed and it is time to change thread.



**20** In the case where you have tried to recall "combination embroidery" file under "multiple hoop embroidery" mode.

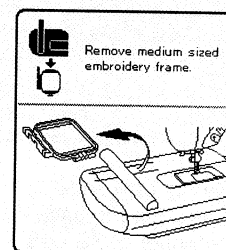
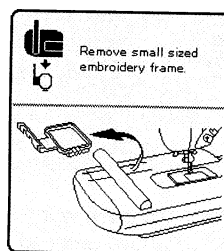


**21** In the case where you have tried to recall "multiple hoop embroidery" file under "combination embroidery" mode.



### Other helpful messages

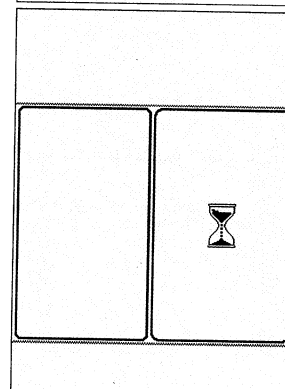
**1** Embroidery frame other than large one is installed on machine when carriage needs to move to starting position.



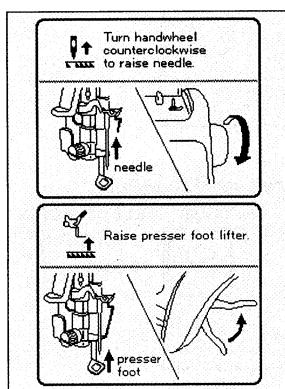
**2**

When sewing machine is processing information.

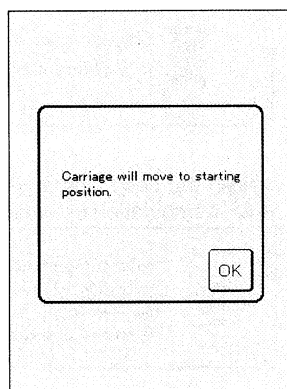
**Caution:** Whenever you see this message do not turn sewing machine off.



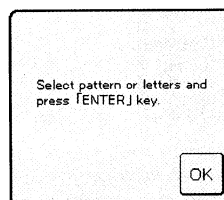
- 3** In the case where needle is not at highest location when turning power on.



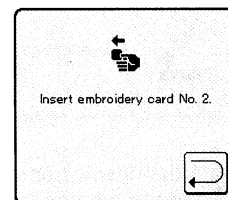
- 4** In the case where carriage moves (This message is given when turning power on).



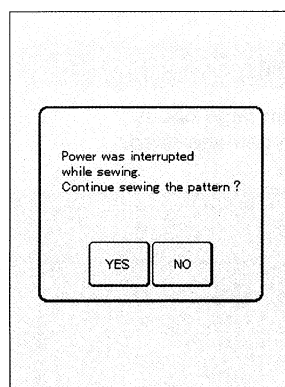
- 9** In the case where you have tried to start embroidering with no pattern selected.



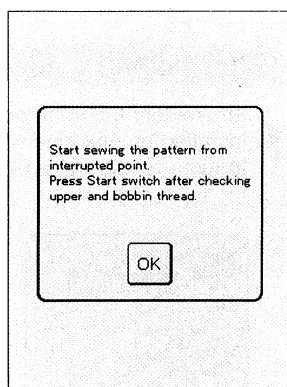
- 10** In the case where pattern provided by card is called up after saved in element memory files 2~13. Example:



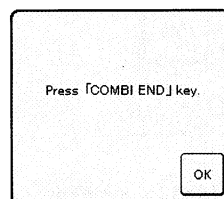
- 5** This message is given when pressing key after re-turning power on in the event that power has been turned off or has failed.



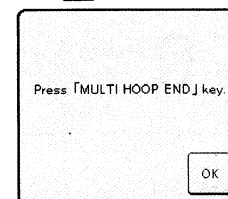
- 6** In the case where you have pressed key to continue sewing after power failure. (See page 86)



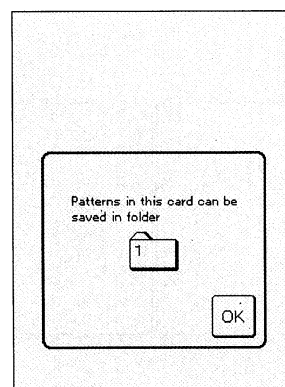
- 11** In the case where you have tried to start embroidering after combining patterns without pressing key.



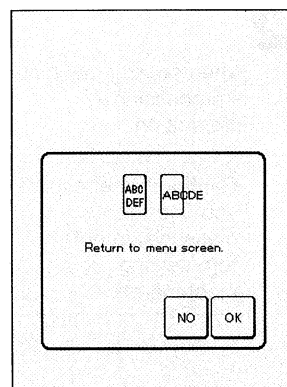
- 12** In the case where you have tried to start embroidering after building a multiple hoop embroidery design without pressing key.



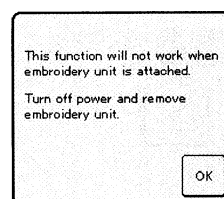
- 7** In the case you have tried to save scanner or PC card in file other than .



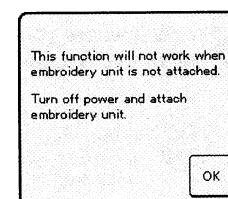
- 8** In the case where you have pressed button.



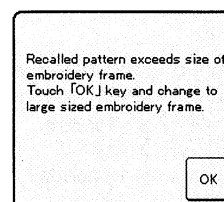
- 13** In case where you have pressed or or button while embroidery unit is attached.



- 14** In case where you have pressed button while embroidery unit is not attached.



- 15** In the case where recalled pattern exceeds size of embroidery frame. Touch [OK] key and change to large sized embroidery frame.



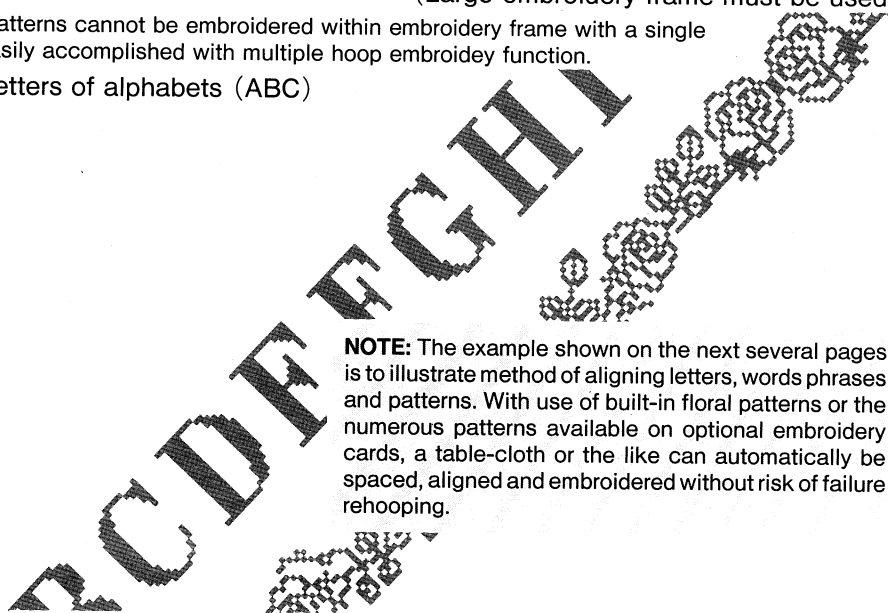
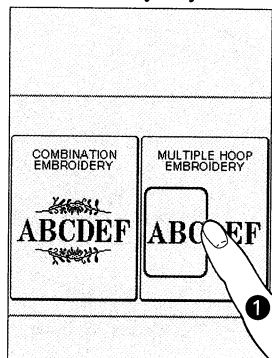
# Multiple Hoop Embroidery [1] Embroidery frame: Large

(Large embroidery frame must be used.)

In the case where words or patterns cannot be embroidered within embroidery frame with a single hooping, large designs are easily accomplished with multiple hoop embroidery function.

**Example:** To embroider letters of alphabets (ABC)

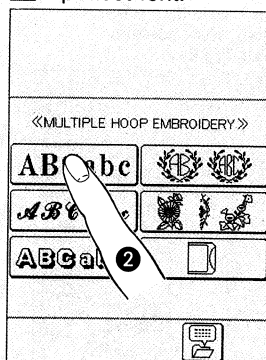
- 1 Press multiple hoop embroidery key.



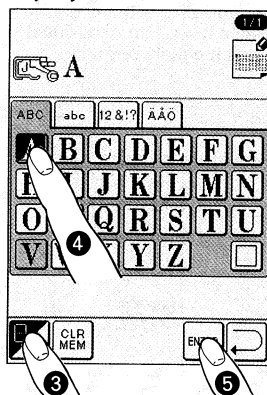
**NOTE:** The example shown on the next several pages is to illustrate method of aligning letters, words phrases and patterns. With use of built-in floral patterns or the numerous patterns available on optional embroidery cards, a table-cloth or the like can automatically be spaced, aligned and embroidered without risk of failure rehooping.

## First designation

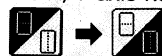
- 2 Select desired alphabet font.



- 3,4,5 Follow instructions.



- 3 Press X/Y axis key.

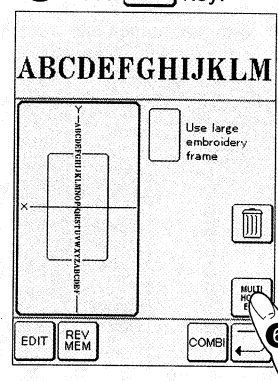


- 4 Press alphabet keys.

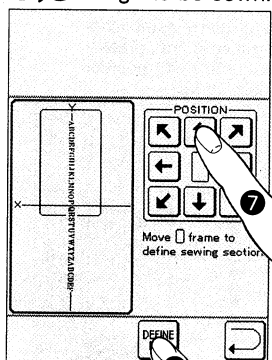
- 5 Once the number of letters to sewn/stored in memory has been determined press ENTER key.



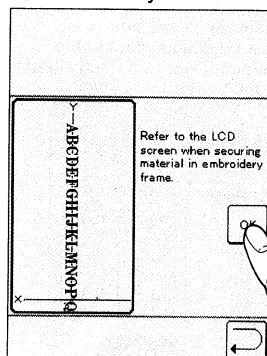
- 6 Press MULTI HOOP END key.



- 7,8 Define location of first part of design to be sewn.



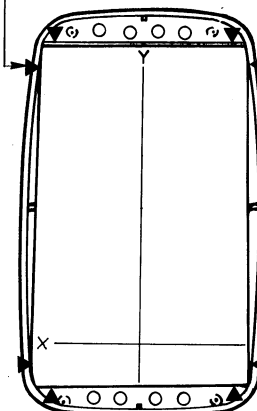
- 9 Secure material in embroidery frame.



When securing material in embroidery frame, take care to install it so that vertical and lateral marker lines on material align inside triangle marks on frame. (see page 95 for preparation of material and marking of lines)

After securing material in frame, press OK key. Attach embroidery frame on embroidery frame holder.

## Triangle marks



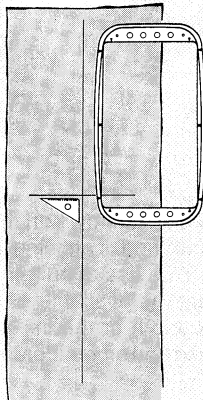
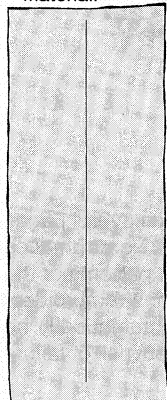
Center design within frame using touch-screen positioning arrows. Press **DEFINE END** key.

**NOTE:** When defining location of portion of design to be sewn (step 1) you must assure both X and Y lines are well within frame.

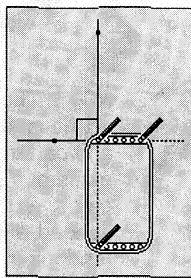
## Preparation of material

With assistant marker

1. Draw a vertical marker line on material.
2. Draw a horizontal marker line at right angles to vertical line on material in sewing area of embroidery frame.

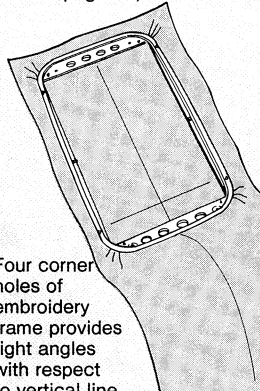


\* How to draw horizontal line if square is not available:

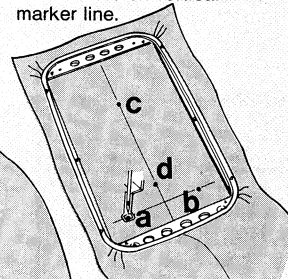


Four corner holes of embroidery frame provides right angles with respect to vertical line.

3. Secure material in embroidery frame. (see page 94)



4. Use touch-screen to position frame and establish needle entry points a and b on horizontal marker line and c and d on vertical marker line.

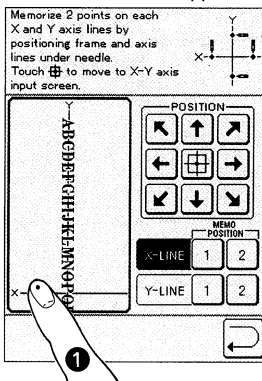


\* Point intervals must be 5cm (2 inches) or more.

## 10 Using touch-screen to establish needle entry points a, b, c and d

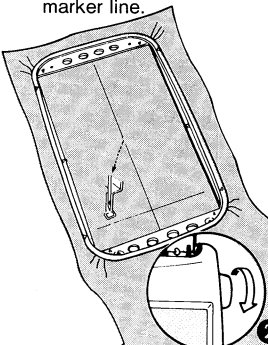
### 1. How to establish needle entry point a

- 1 Press touch-screen in lower left portion and a marker dot will appear.

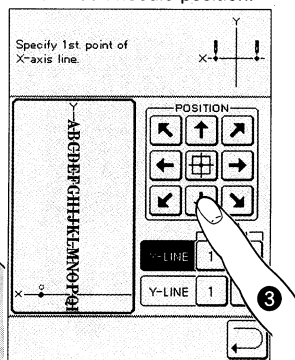


Embroidery frame will automatically shift placing needle above horizontal line.

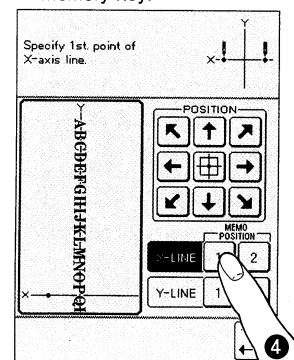
- 2 Turn handwheel to ascertain that needle rests above horizontal marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

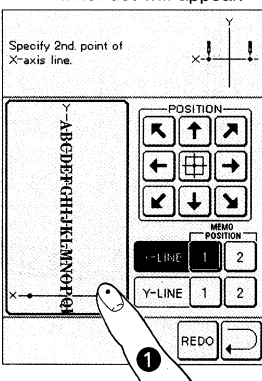


- 4 Once needle entry point is properly established on X-axis line, press first- point position memory key.



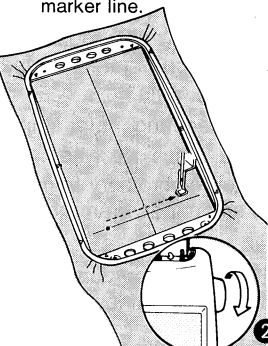
### 2. How to establish needle entry point b

- 1 Press touch-screen in lower right portion and a marker dot will appear.

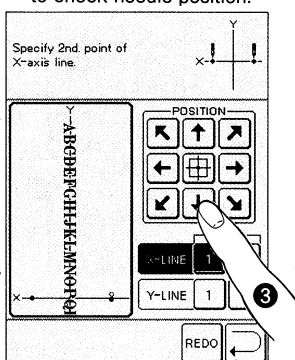


Embroidery frame will automatically shift placing needle above horizontal line.

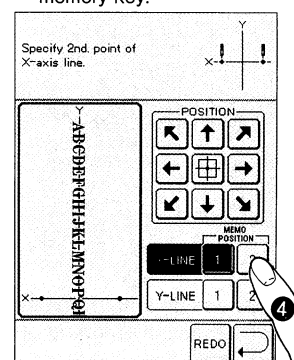
- 2 Turn handwheel to ascertain that needle rests above horizontal marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

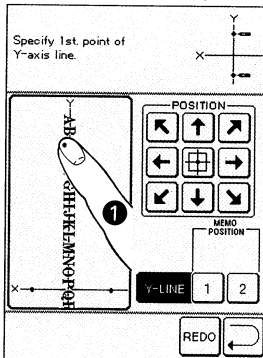


- 4 Once needle entry point is properly established on X-axis line, press second- point position memory key.



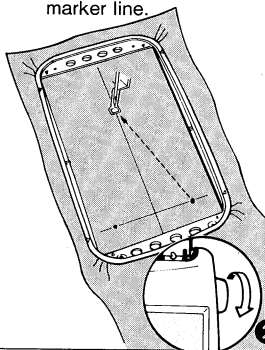
### 3. How to establish needle entry point c

- 1 Press touch-screen in upper center portion and a marker dot will appear.

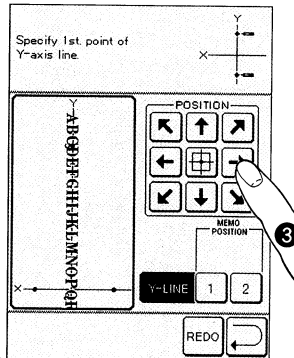


Embroidery frame will automatically shift placing needle above vertical line.

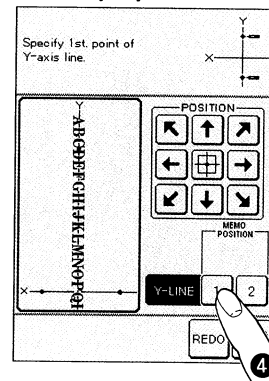
- 2 Turn handwheel to ascertain that needle rests above vertical marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

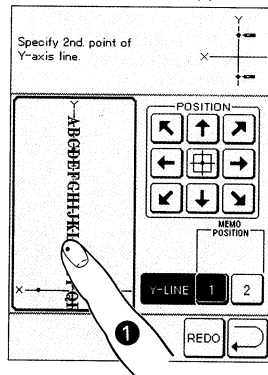


- 4 Once needle entry point is properly established on Y-axis line, press first-point position memory key.



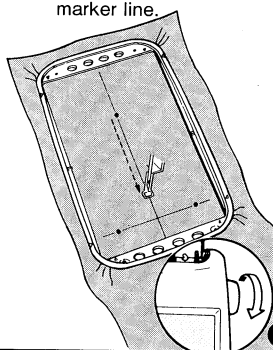
### 4. How to establish needle entry point d

- 1 Press touch-screen in lower center portion and a marker dot will appear.

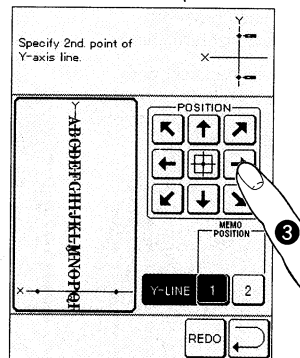


Embroidery frame will automatically shift placing needle above vertical line.

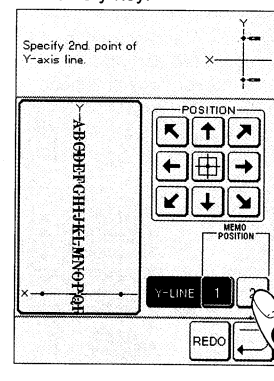
- 2 Turn handwheel to ascertain that needle rests above vertical marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

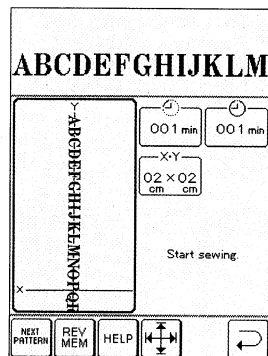


- 4 Once needle entry point is properly established on Y-axis line, press second-point position memory key.



\*In the event it is necessary to correct X-Y axis positioning press **REDO** key.

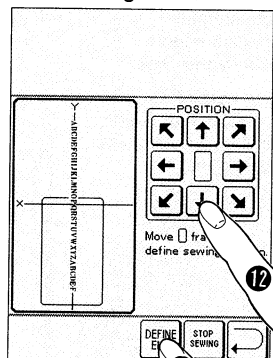
- 11 Press start/stop button.



### Second designation

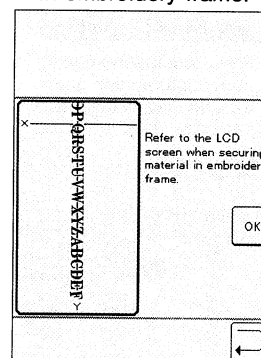
Sewing machine is embroidering first part of design.

- 12,13 Define location of second part of design to be sewn.



Center design within frame using touch-screen positioning arrows.  
Press **DEFINE END** key.

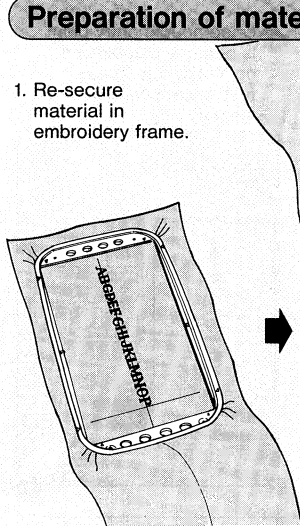
- 14 Resecure material in embroidery frame.



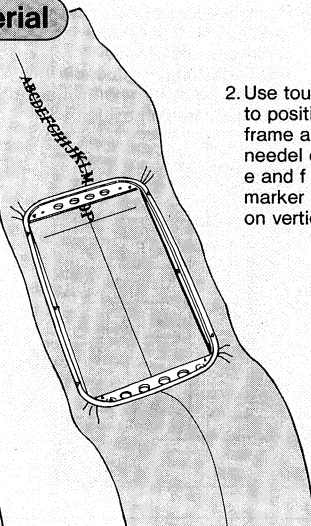


## Preparation of material

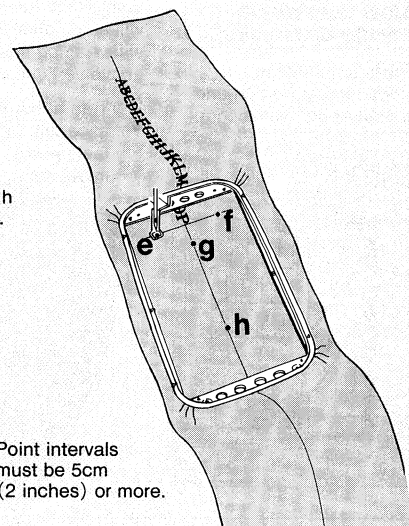
1. Re-secure material in embroidery frame.



2. Use touch-screen to position frame and establish needle entry points e and f on horizontal marker line and g and h on vertical marker line.



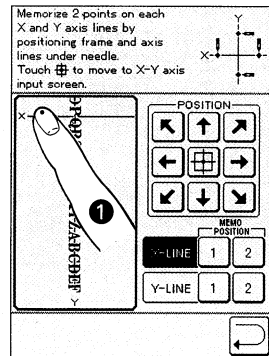
\*Point intervals must be 5cm (2 inches) or more.



## 15 Using touch-screen to establish needle entry points e, f, g and h

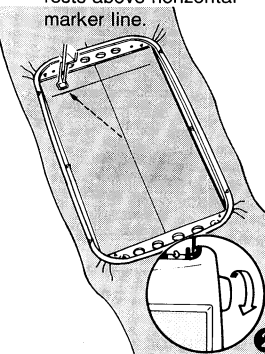
### 1. How to establish needle entry point e

- 1 Press touch-screen in upper left portion and a marker dot will appear.

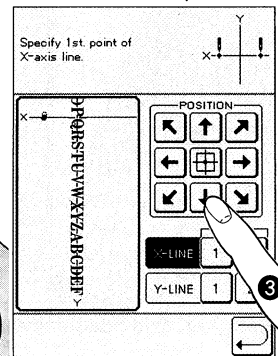


Embroidery frame will automatically shift placing needle above horizontal line.

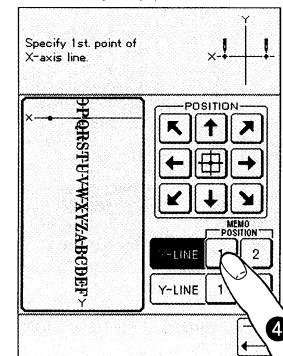
- 2 Turn handwheel to ascertain that needle rests above horizontal marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

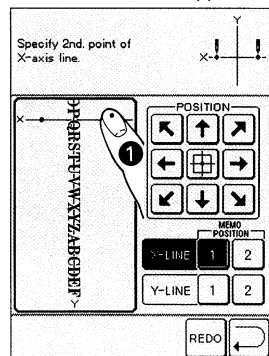


- 4 Once needle entry point is properly established on X-axis line, press first- point position memory key.



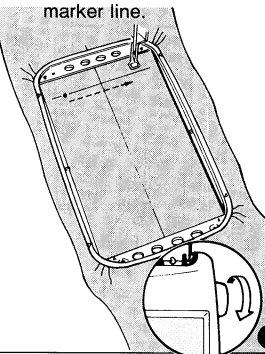
### 2. How to establish needle entry point f

- 1 Press touch-screen in upper right portion and a marker dot will appear.

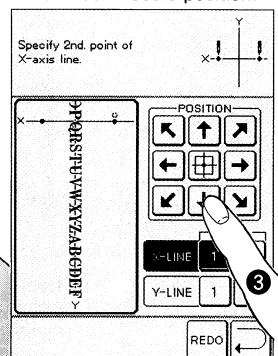


Embroidery frame will automatically shift placing needle above horizontal line.

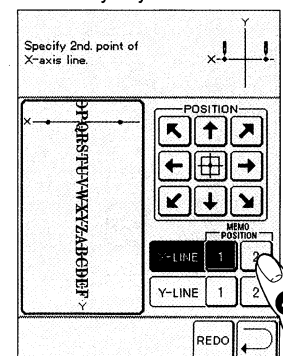
- 2 Turn handwheel to ascertain that needle rests above horizontal marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.



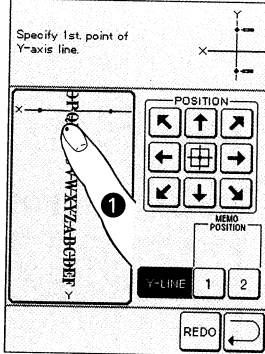
- 4 Once needle entry point is properly established on X-axis line, press second- point position memory key.





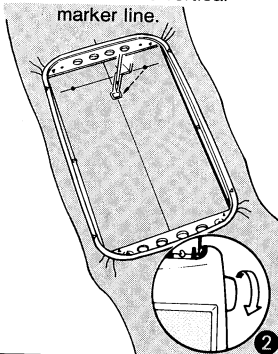
### 3. How to establish needle entry point g

- 1 Press touch-screen in upper center portion and a marker dot will appear.

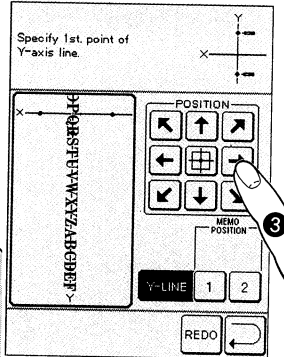


Embroidery frame will automatically shift placing needle above vertical line.

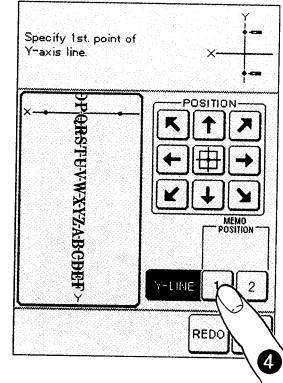
Turn handwheel to ascertain that needle rests above vertical marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

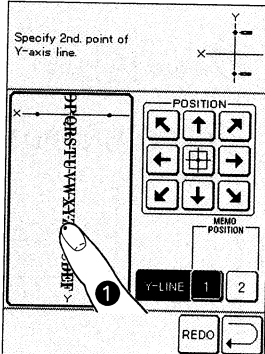


- 4 Once needle entry point is properly established on Y-axis line, press first-point position memory key.



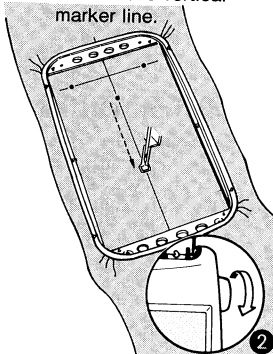
### 4. How to establish needle entry point h

- 1 Press touch-screen in lower center portion and a marker dot will appear.

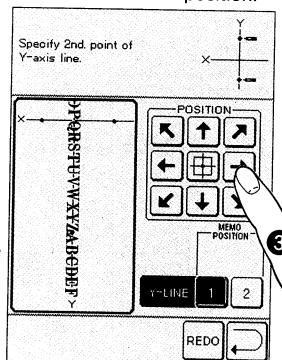


Embroidery frame will automatically shift placing needle above vertical line.

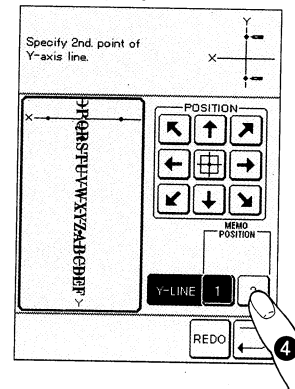
- 2 Turn handwheel to ascertain that needle rests above vertical marker line.



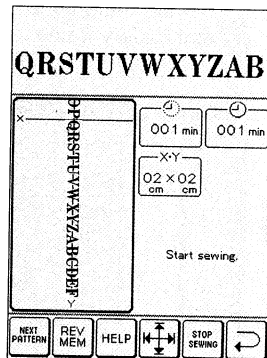
- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.



- 4 Once needle entry point is properly established on Y-axis line, press second-point position memory key.

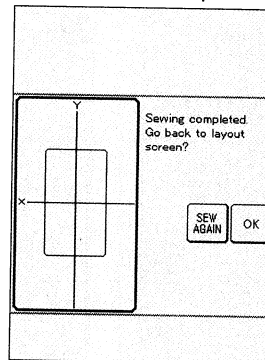


- 16 Press start/stop button.



Sewing machine is embroidering second part of design.

- 17 Decide next step.



\* If you want to embroider same design again, press **SEW AGAIN** key.

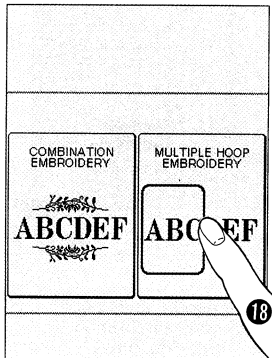
\* If you want to embroider additional/subsequent letters of alphabets, (or names, words or patterns)

press **OK** key, prepare material, shift position appropriately and re-secure it in embroidery frame. (see pages 99~101 for procedure to follow to extend sewing beyond 2 frames)

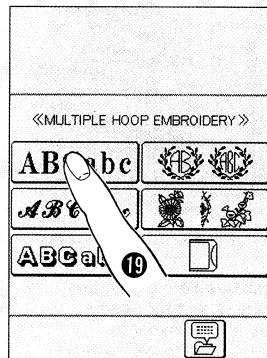
To embroider letters, words, patterns beyond sewing area in 2nd part of overall design

### Third designation

**18** Press multiple hoop embroidery key.



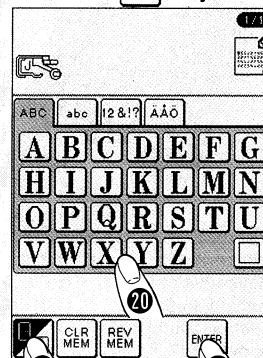
**19** Select desired alphabet font.



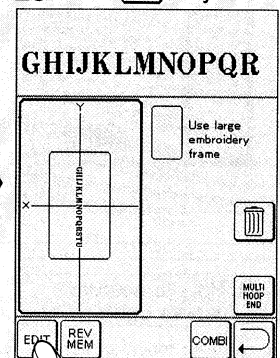
**20** Press alphabet key.

**21** Press key.

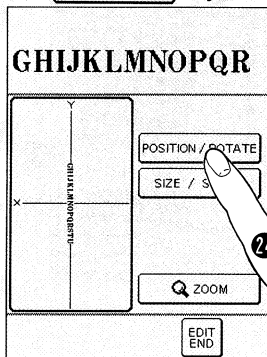
**22** Press key.



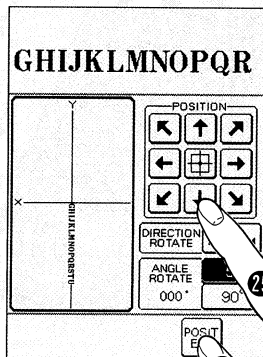
**23** Press key.



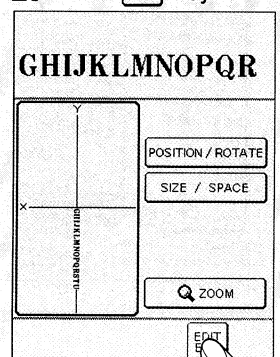
**24** Press key.



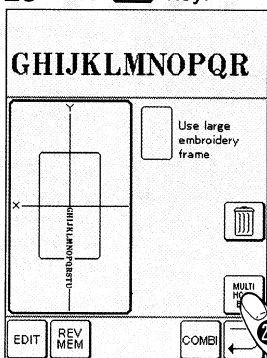
**25** Press arrow key to space so that top end of designated design almost touches horizontal line.



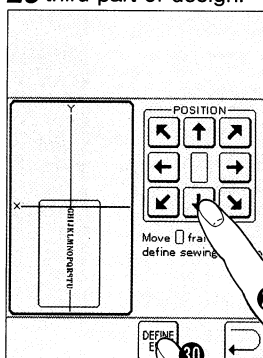
**27** Press key.



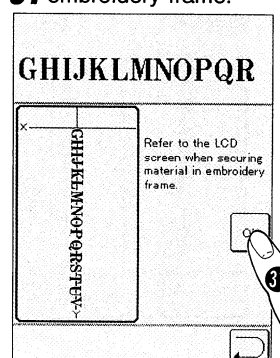
**28** Press key.



**29** Define location of third part of design.



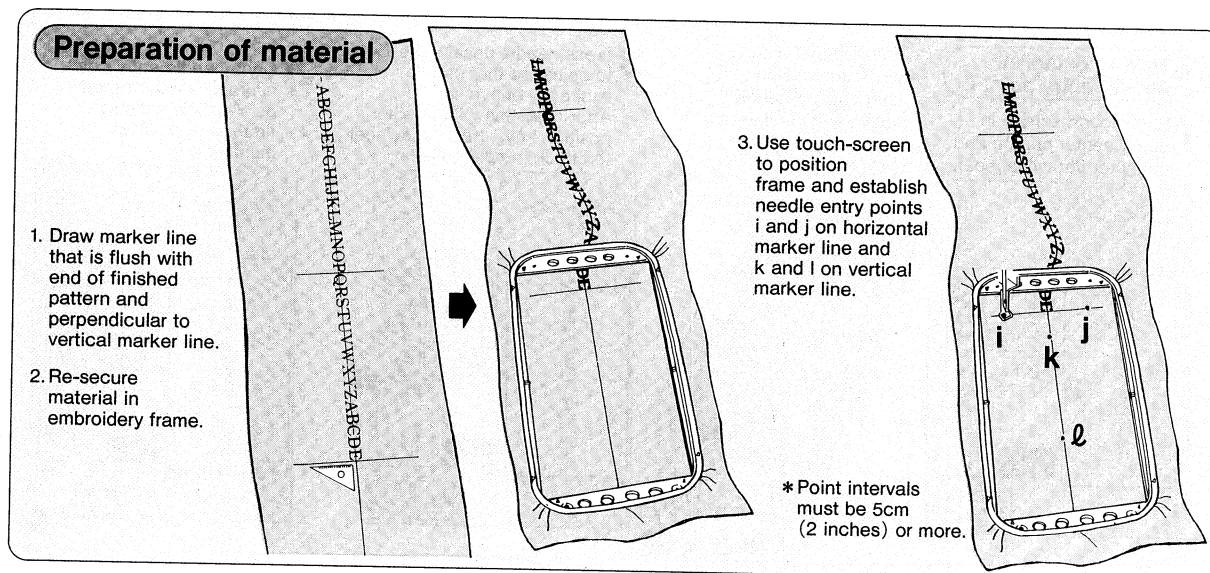
**31** Secure material in embroidery frame.



Center design within frame using positioning arrows.

**30** Press key.

Press key.



## 32 Using touch-screen to establish needle entry points i, j, k and l

### 1. How to establish needle entry point i

- 1 Press touch-screen in upper left portion and a marker dot will appear.

Memorize 2 points on each X and Y axis lines by positioning frame and axis lines under needle. Touch to move to X-Y axis input screen.

Embroidery frame will automatically shift placing needle above horizontal line.

- 2 Turn handwheel to ascertain that needle rests above horizontal marker line.

- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

- 4 Once needle entry point is properly established on X-axis line, press first-point position memory key.

### 2. How to establish needle entry point j

- 1 Press touch-screen in upper right portion and a marker dot will appear.

Specify 2nd point of X-axis line.

Embroidery frame will automatically shift placing needle above horizontal line.

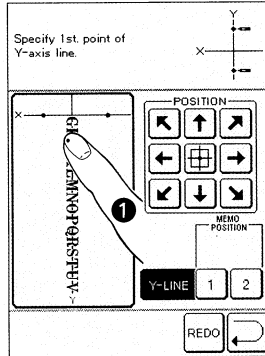
- 2 Turn handwheel to ascertain that needle rests above horizontal marker line.

- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

- 4 Once needle entry point is properly established on X-axis line, press second-point position memory key.

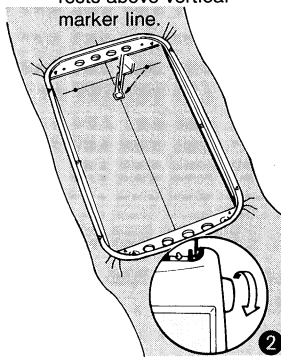
### 3. How to establish needle entry point k

- 1 Press touch-screen in upper center portion and a marker dot will appear.

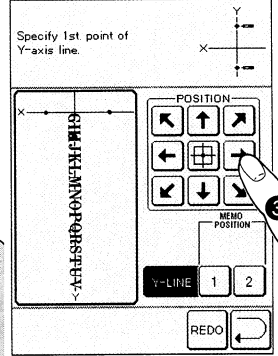


Embroidery frame will automatically shift placing needle above vertical line.

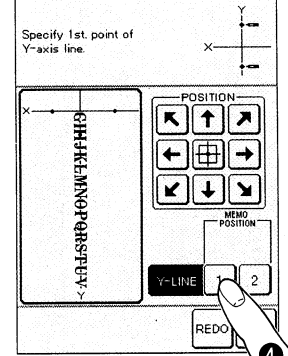
- 2 Turn handwheel to ascertain that needle rests above vertical marker line.



- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.

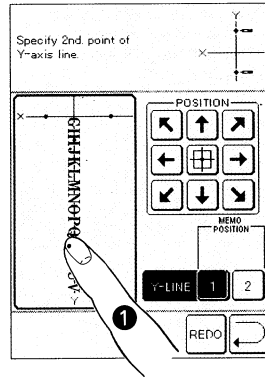


- 4 Once needle entry point is properly established on Y-axis line, press first-point position memory key.



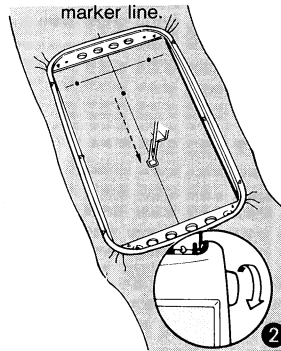
### 4. How to establish needle entry point l

- 1 Press touch-screen in lower center portion and a marker dot will appear.

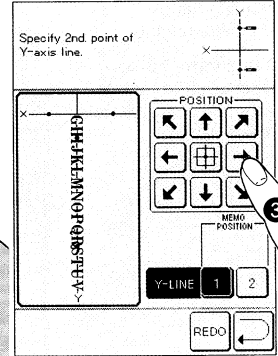


Embroidery frame will automatically shift placing needle above vertical line.

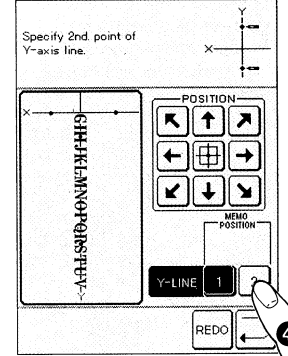
- 2 Turn handwheel to ascertain that needle rests above vertical marker line.



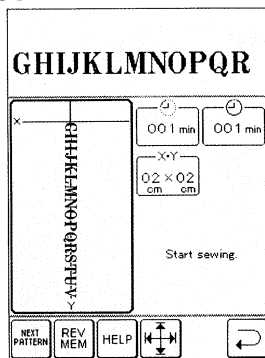
- 3 Press needle position key to adjust so that needle is directly above line. After adjusting with needle position keys, turn handwheel to check needle position.



- 4 Once needle entry point is properly established on Y-axis line, press second-point position memory key.

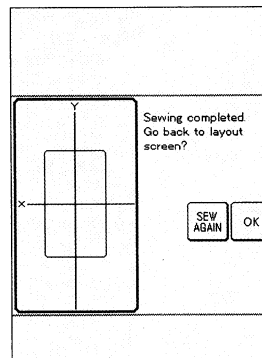


- 33 Press start/stop button.



Sewing machine is embroidering third part of design.

- 34 Decide next step.



\* If you want to embroider same design again, press **SEW AGAIN** key.

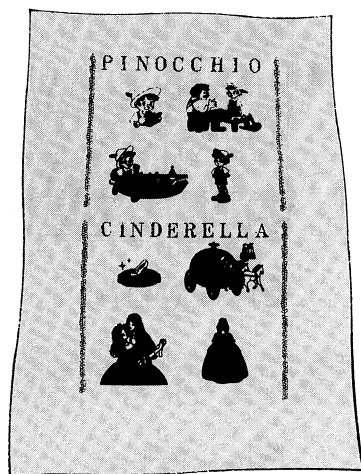
\* If you want to embroider additional/subsequent letters of alphabets, (or names, words or patterns)

press **OK** key, prepare material, shift position appropriately and re-secure it in embroidery frame.

## Multiple Hoop Embroidery [ 2 ]

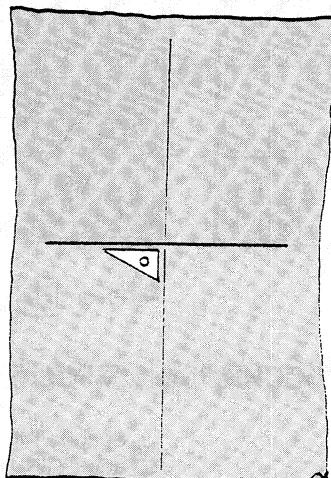
Multiple hoop embroidery may also be easily sewn by joining 4 or more adjacent hoopings. The following instructions and example illustrates how to bring together all the elements to create a 250 x 470 mm design made up of built-in alphabet, built-in floral borders and data from an optional embroidery card.

This example uses optional embroidery card number 16 Fairy Tales:

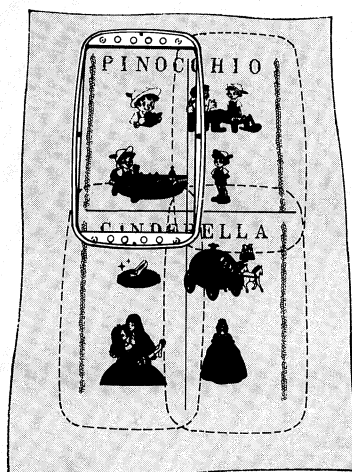


### Preparation of fabric

Draw cross lines so that the lines make right angles in the center of fabric.



Plan design keeping in mind number of hoopings required.



In this case, 4 hoopings are required.

### 1. Select Floral Border Patterns and position on layout screen.

- 1 Press key.
- 2 Press key.
- 3 Press page button for desired screen.
- 4 Press desired pattern key.
- 5 Press key.
- 6 Press key.
- 7 Press key.
- 8 Position pattern to upper most left placement.
- 9 Press key.
- 10 Repeat steps 1~9 until 4 floral borders are positioned.
- 11 Press key.

## 2. Select alphabet letter and enter the names "PINOCCHIO" and "CINDERELLA".

**1** Press **COMBI** key.

**2** Press **ABCabc** key.

**3** Select alphabet letters.

**4** Press **ENTER** key.

**5** With use of edit function position both names.

**6** Press **EDIT** key.

## 3. Adjust size and space of "PINOCCHIO" and "CINDERELLA".

**1** Press **SIZE / SPACE** key.

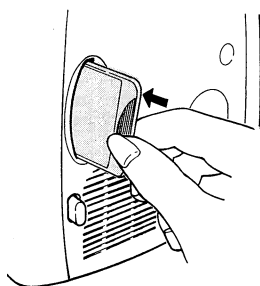
**2** Adjust names size.

**3** Space PINOCCHIO to equal CINDERELLA.

**4** Press **POSIT END** key.

**5** Press **EDIT END** key.

## 4. Insert optional card No.16 into slot of sewing machine.



## 5. Select Pinocchio and Cinderella patterns. Use edit function to individually position each pattern.

**4**

Press **POSIT END** key.



## 6. Position embroidery frame and secure material in frame.

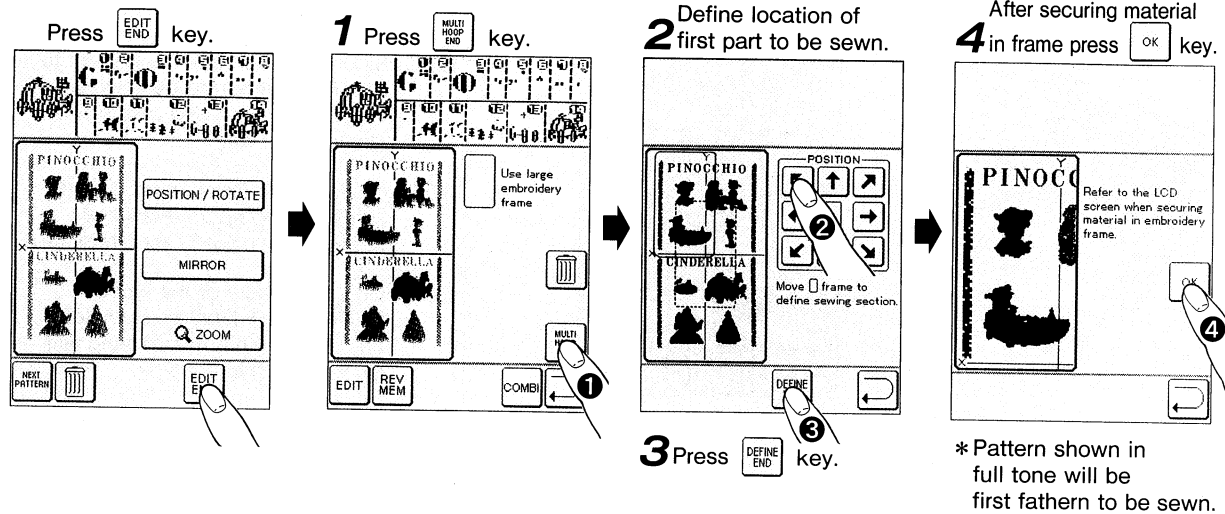
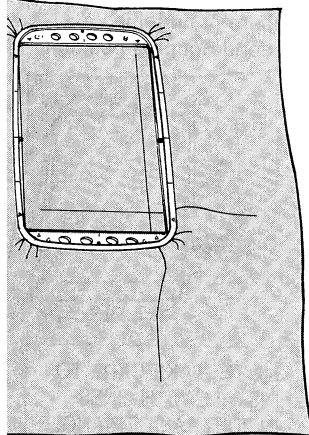
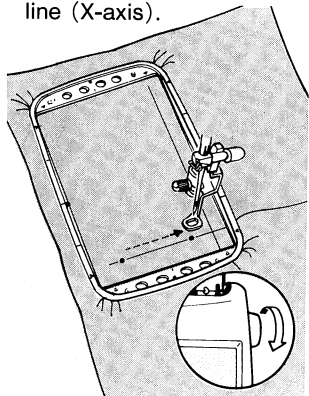


Illustration of how to secure material in first hooping position.

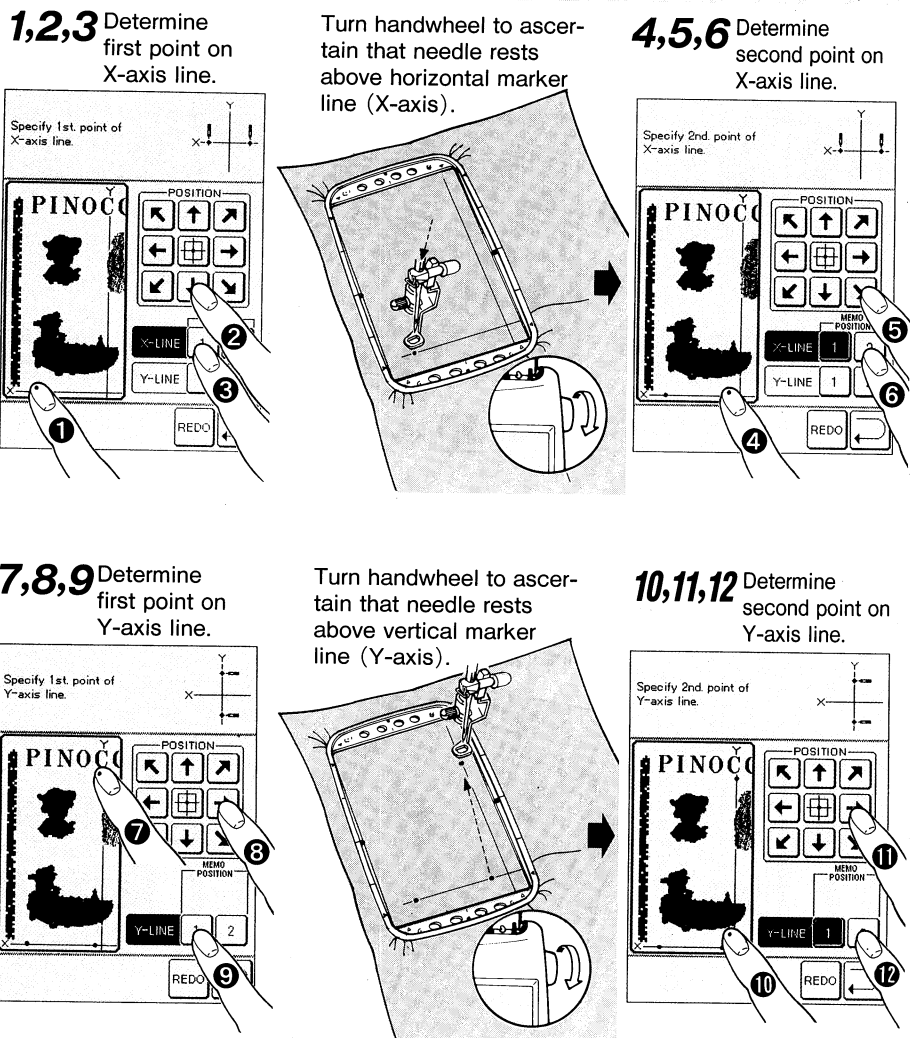


**NOTE: TAKE CARE TO INSTALL WITH LINES INSIDE FRAME TRIANGLE MARKS (SEE PAGE 94).**

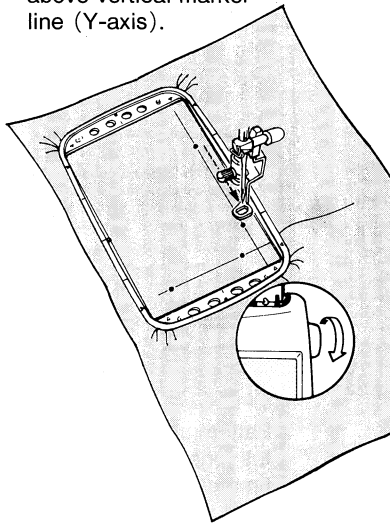
Turn handwheel to ascertain that needle rests above horizontal marker line (X-axis).



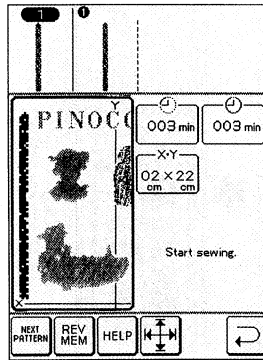
## 7. Use touch-screen to establish needle entry points



Turn handwheel to ascertain that needle rests above vertical marker line (Y-axis).



## 8. Sew all patterns in first hooping position.



**NOTE:** Machine will determine pattern to sew first. Pattern to be sewn will show in full tone and others will show in half tone.

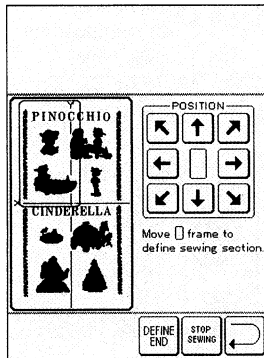
**NOTE:** Steps and color changes are the same as sewing an individual pattern (see page 77 for reference).

**NOTE:** Only the letters of the name PINOCCHIO which are complete and show within this framing will be sewn in this hooping.

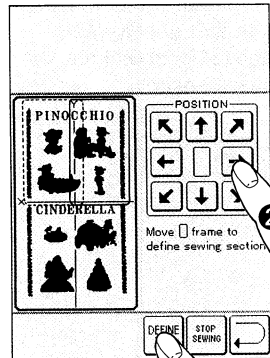
**NOTE:** If you desire to change sewing order press .

## 9. Position embroidery frame and secure material for 2nd hooping.

**1** This screen will appear when sewing is completed.



**2** Define location of second part to be sewn.



**4** After securing material in frame press key.

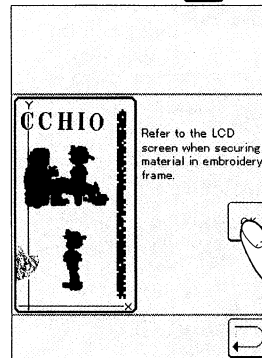
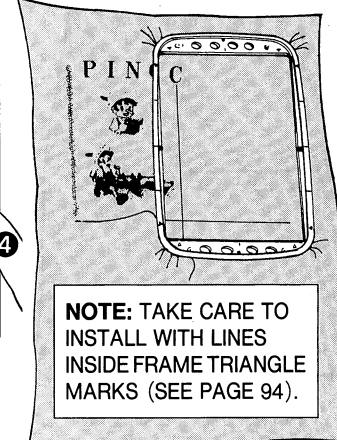


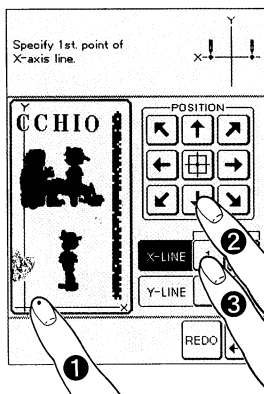
Illustration of how to secure material in second hooping position.



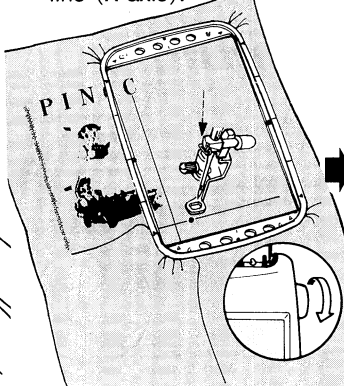
**3** Press key.

## 10. Use touch-screen to establish needle entry points for 2nd hooping.

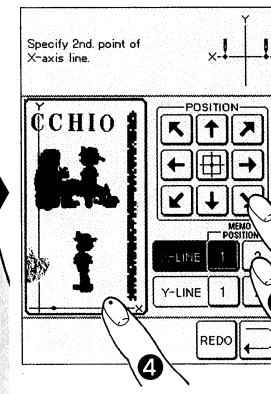
**1,2,3** Determine first point on X-axis line.



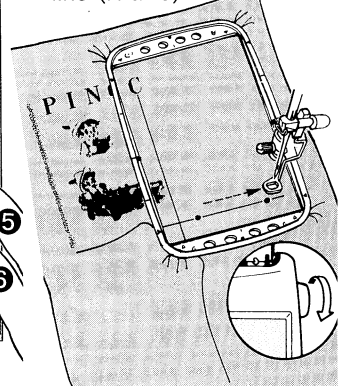
Turn handwheel to ascertain that needle rests above horizontal marker line (X-axis).



**4,5,6** Determine second point on X-axis line.

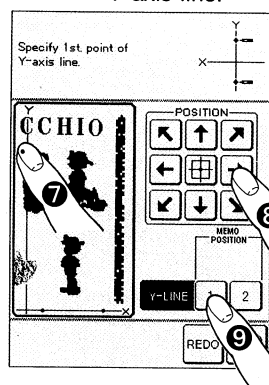


Turn handwheel to ascertain that needle rests above horizontal marker line (X-axis).

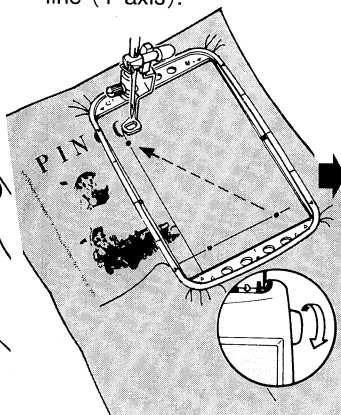




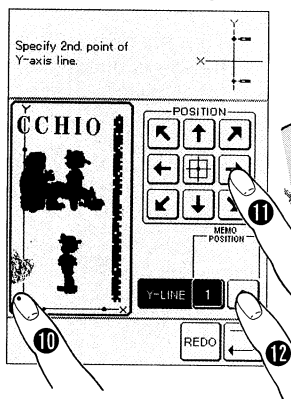
**7,8,9** Determine first point on Y-axis line.



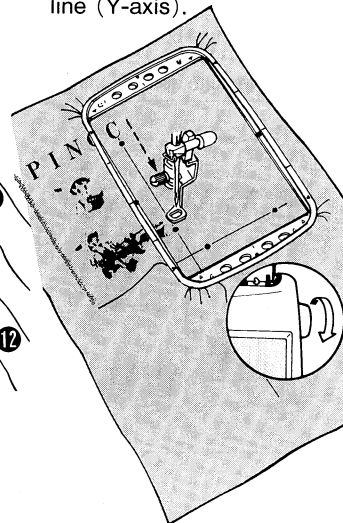
Turn handwheel to ascertain that needle rests above vertical marker line (Y-axis).



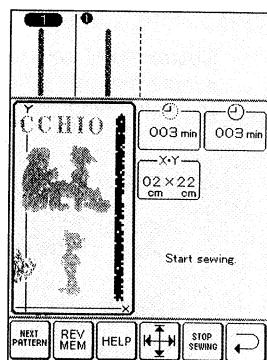
**10,11,12** Determine second point on Y-axis line.



Turn handwheel to ascertain that needle rests above vertical marker line (Y-axis).



**11. Sew all patterns in second hooping position.**



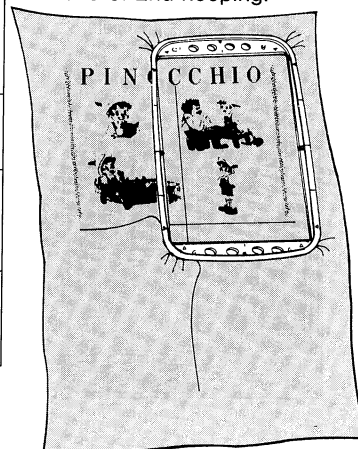
**NOTE:** As with first hooping machine will determine which pattern to sew first. Pattern to be sewn will show in full tone.

**NOTE:** Steps and color changes are the same as individual patterns.

**NOTE:** The remaining letters of the name PINOCCHIO will be sewn in second hooping.

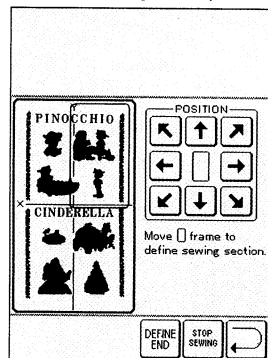
**NOTE:** Pattern sewing order may be changed by pressing **NEXT PATTERN** key.

Illustration of sewing at end of 2nd hooping.

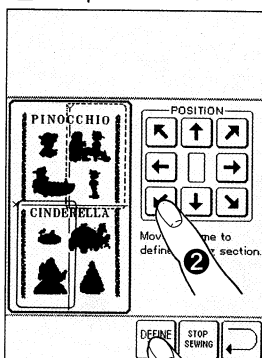


**12. Position embroidery frame and secure material for 3rd hooping.**

**1** This screen will appear when sewing is completed.



**2** Define location of third part to be sewn.



**3** Press **DEFINE END** key.

**4** After securing material in frame press **OK** key.

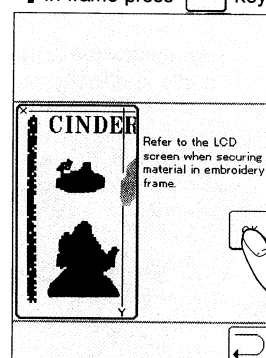
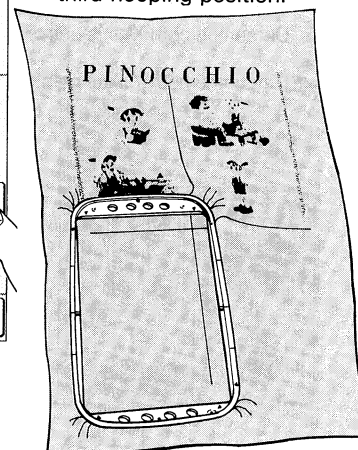


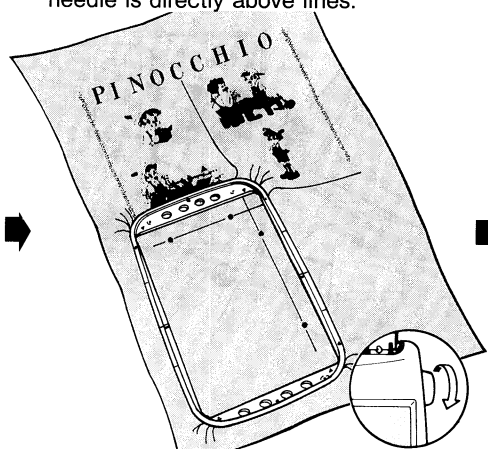
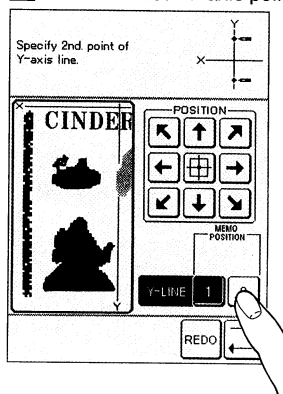
Illustration of how to secure material in third hooping position.



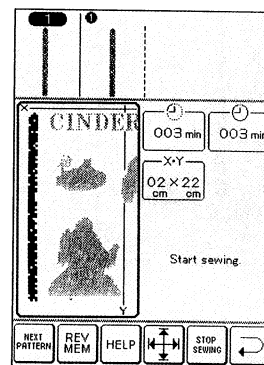
### 13. Use touch-screen to establish needle entry points for 3rd hooping.

- 1 Determine both X-axis points.
- 2 Determine both Y-axis points.

Turn handwheel to ascertain needle is directly above lines.

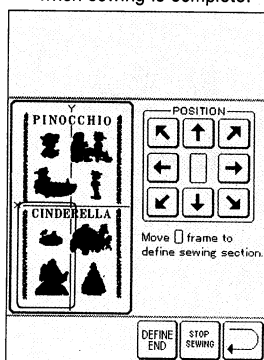


### 14. Sew all patterns in third hooping position.

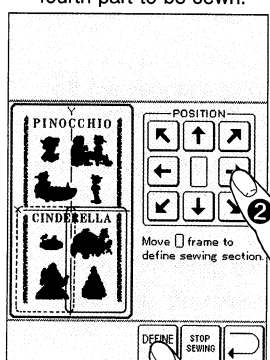


### 15. Position embroidery frame and secure material for 4th hooping.

- 1 This screen will appear when sewing is complete.



- 2 Define location of fourth part to be sewn.



- 4 After securing material in frame press **OK** key.

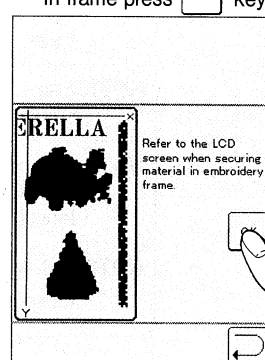


Illustration of how to secure material in fourth hooping position.

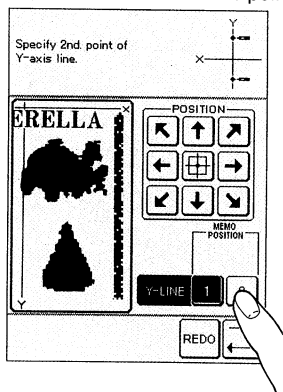


- 3 Press **DEFINE END** key.

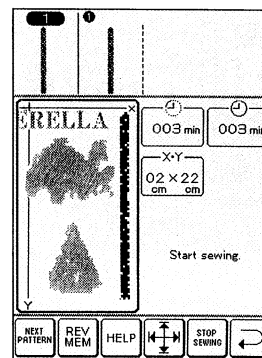
### 16. Use touch-screen to establish needle entry points for 4th hooping.

- 1 Determine both X-axis points.
- 2 Determine both Y-axis points.

Turn handwheel to ascertain needle is directly above lines.

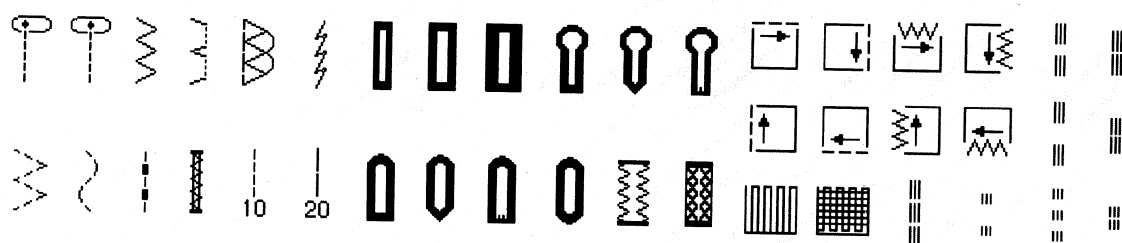


### 17. Sew all patterns in fourth hooping position.

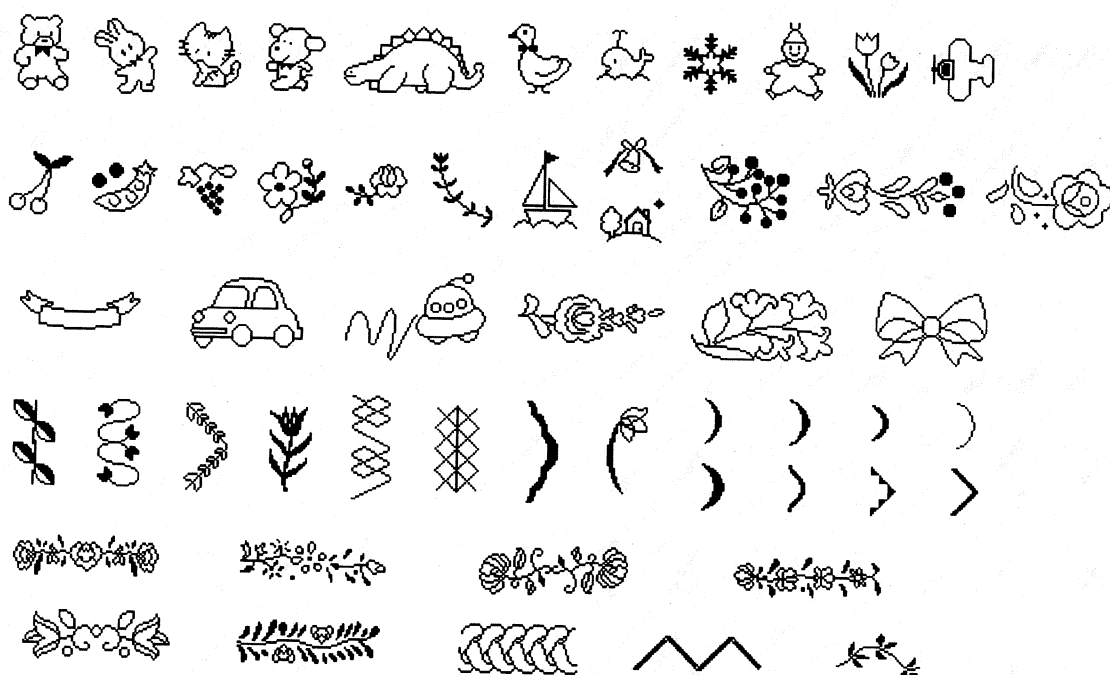


# Pattern/Alphabet Stitch List

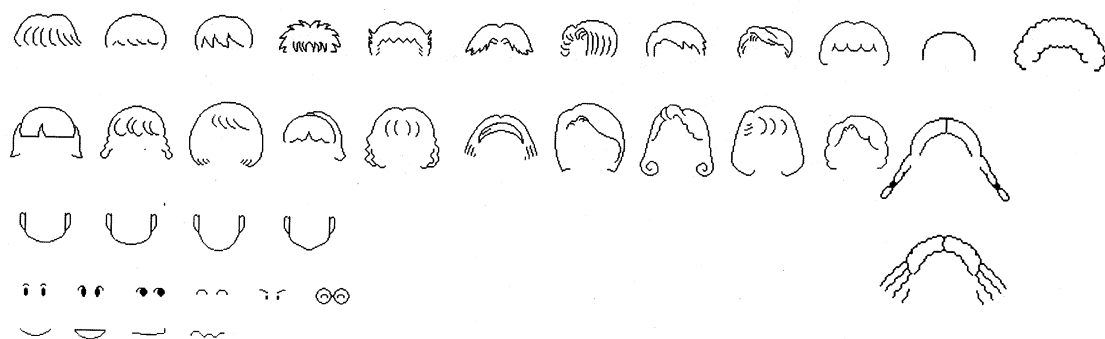
## Utility patterns



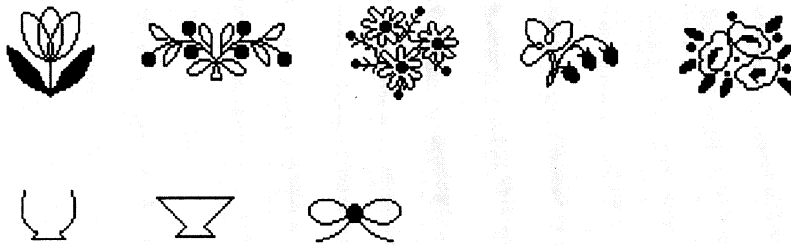
## Large Size patterns



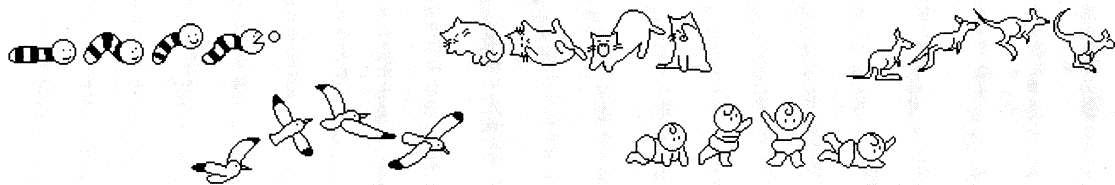
## Fun-face patterns



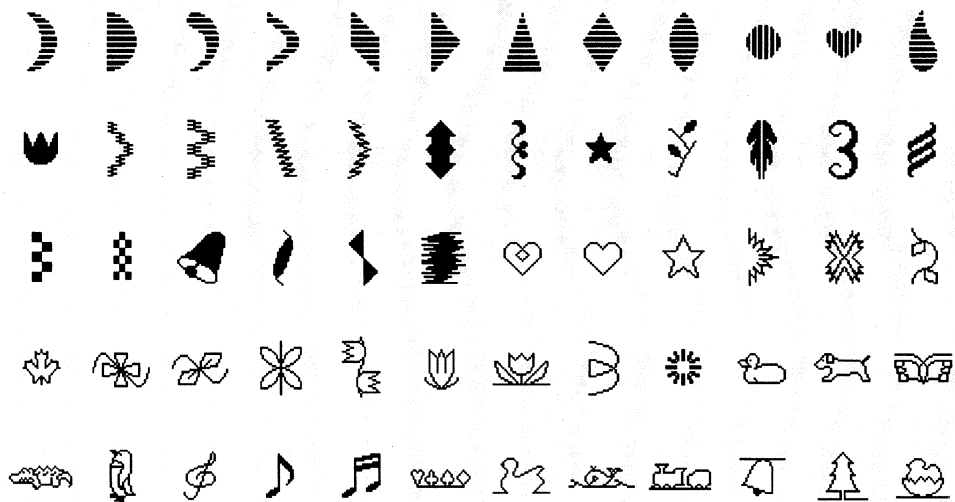
## Fun-flower patterns



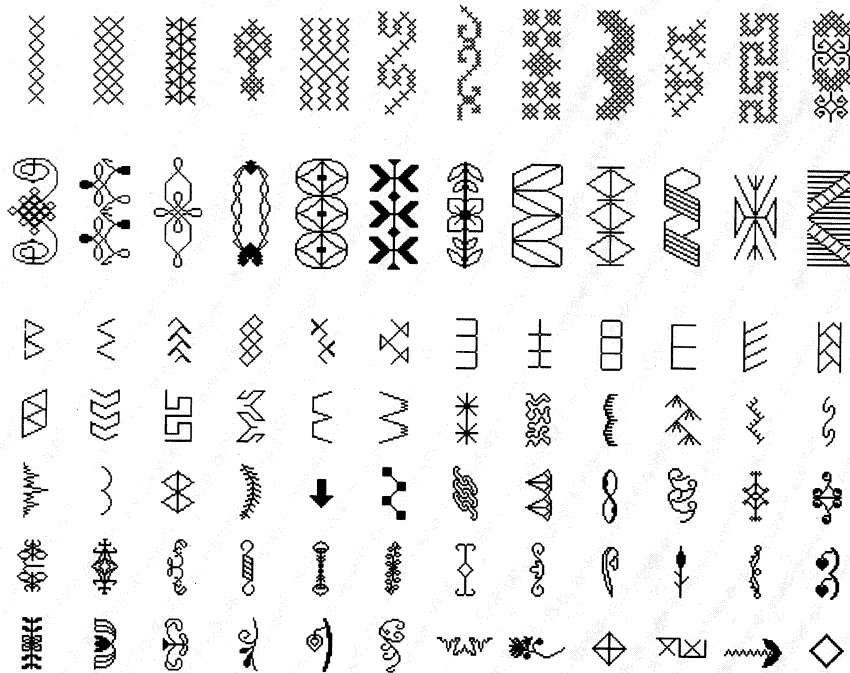
## Animated patterns



## Single Regular patterns



## Continuous Regular patterns



## Alphabet patterns

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
 abcdefghijklmnopqrstuvwxyz  
 Ä Å Ö Ü Æ Æ Ñ Ø ß ä å ö ü æ œ ñ ø à á â ã ç è é ê ë ì í î ï ò ó ô ù  
 1 2 3 4 5 6 7 8 9 0 □ □ □ □ □ □ □ □ & ? ! / < >

*A B C D E F G H I J*  
*K L M N O P Q R S*  
*T U V W X Y Z*  
*a b c d e f g h i j k l m*  
*n o p q r s t u v w x y z*  
*Ä Å Ö Ü Æ Æ Ñ Ø ß*  
*ä å ö ü æ œ ñ ø à á â ã ç è é ê ë ì í î ï ò ó ô ù*  
*1 2 3 4 5 6 7 8 9 0 & ? !*  
*□ □ □ □ □ □ □ □ / < >*

*A B C D E F G H I J*  
*K L M N O P Q R S*  
*T U V W X Y Z*  
*a b c d e f g h i j k l m*  
*n o p q r s t u v w x y z*  
*Ä Å Ö Ü Æ Æ Ñ Ø ß*  
*ä å ö ü æ œ ñ ø à á â ã ç è é ê ë ì í î ï ò ó ô ù*  
*1 2 3 4 5 6 7 8 9 0 & ? !*  
*□ □ □ □ □ □ □ □ / < >*

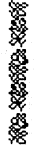
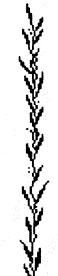
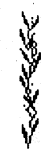
# Embroidery pattern Stitch List

\*Steps and colors suggested for following patterns are indicated on Instruction book cover.

## Floral patterns



## Floral Border patterns



## Alphabet patterns

ABCDEFGHIJKLMNOPQRSTUVWXYZ

a b c d e f g h i j k l m n o p q r s t u v w x y z

**1 2 3 4 5 6 7 8 9 0 □ . □ - □ . □ ' □ ~ & ? ! / < >**

Ä Å Ö Ü Æ Œ Ñ Ø ß ä å ö ü æ œ ñ ø â á â ç è é ê ë ì í ò ô û

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

*a b c d e f g h i j k l m n o p q r s t u v w x y z*

**1234567890&?!□□□'□~ / [ >**

À Á Â Ã Ä Å Æ Ç È É

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

**1234567890 &!?, . « » ’ ~ ¨ □ ▯**

ÄÅÖÜÆŒÑÐΒάαὐῦæœñοάάâçèéêëïìóõ

## Monogram patterns

A B C D E F G H I J K L M N

0123456789ABCDEFGHIJKL

AB C D E F G H I J K L M N

DPQRS TUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

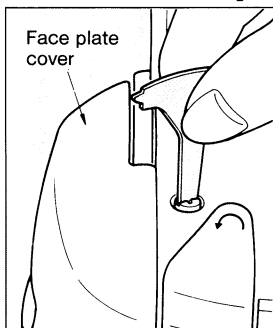
ABCDEFGHIJKLMNOPQRSTUVWXYZ



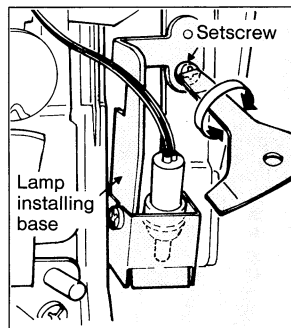
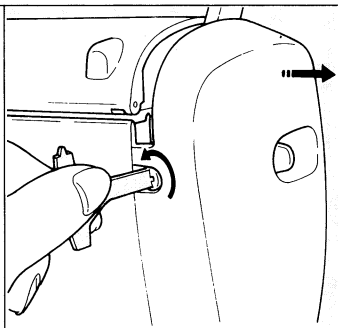


**CAUTION:** Be sure to disconnect plug from wall outlet before opening cover.

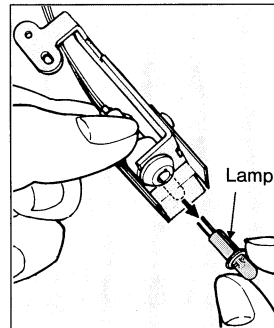
## How To Replace Light Bulb



Using exclusive screwdriver, loosen setscrews at rear and top side of face plate cover about two turns, and pull cover straight off.



Loosen setscrew and remove lamp installing base.

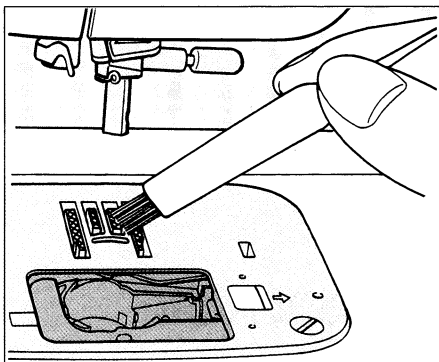


Pull out lamp without twisting. Insert new lamp along narrow groove.

## Cleaning

### Removing lint and dust

Accumulation of lint or dust may cause problems. Always keep sewing machine clean.



### CAUTION:

Be sure to disconnect plug from wall outlet before cleaning machine.

Remove needle and presser foot, and clean area between feed dog teeth and slots in needle plate, using brush furnished with machine. Always keep area around hook and bobbin case clean.

### CAUTION:

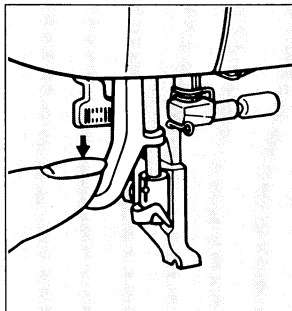
Contact dealer for correct light bulb replacement. Power consumption of bulb is 5 watts.

## How to Replace Needle Threader Hook Holder (Optional Part) Part No.283075

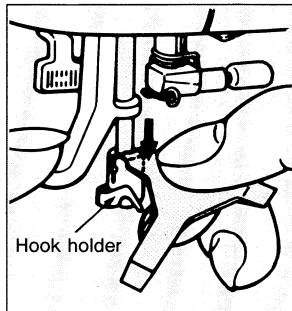


**CAUTION:** Be sure to disconnect plug from wall outlet before removing needle.

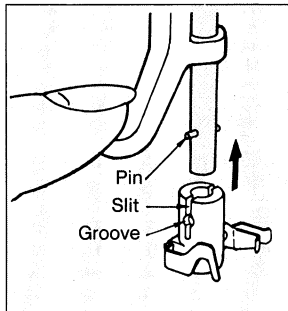
- 1** Remove needle and presser foot.



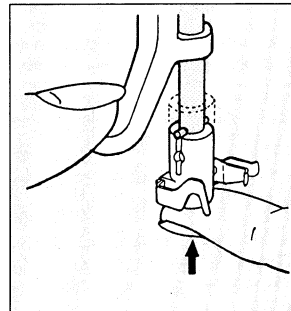
- 2** Place exclusive screwdriver on top of hook holder and push down.



- 3** Align slit in new hook holder with needle threader shaft pin.



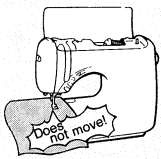
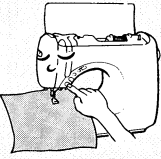
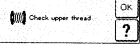


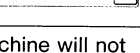

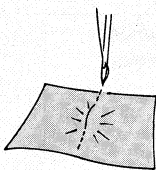
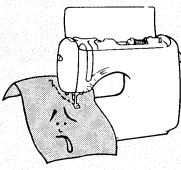
- 4** Push new hook holder up from bottom with finger until it snaps in place.

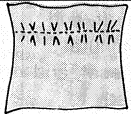
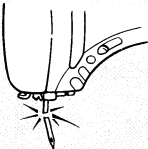
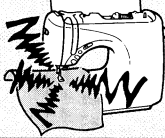
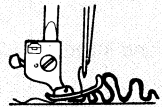
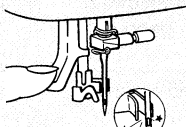
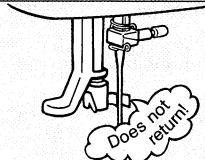
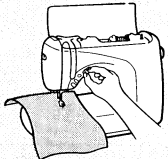




# Performance Checklist

If sewing difficulties occur, make sure instructions are correctly followed. If a problem still exists, reminders below may help solve it.

	Problem	Cause (Reason)	Action to be taken	Page
	<ul style="list-style-type: none"> <li>Sewing machine suddenly stops during sewing.</li> <li>Light is on, and handwheel can be turned by hand smoothly.</li> </ul>	<ul style="list-style-type: none"> <li>Sewing machine has been run at low sewing speed for an extended period of time.</li> <li>Machine is designed to automatically turn motor power off to prevent overheating.</li> </ul>	<ul style="list-style-type: none"> <li>Turn power switch off, and wait for about 20 minutes. Safety device will reset, and machine will be ready to operate.</li> </ul>	—
	<ul style="list-style-type: none"> <li>Needle will not move.</li></ul>    	<ul style="list-style-type: none"> <li>Upper thread has run out.</li> <li>Presser foot is up.</li> <li>Bobbin winder shaft was left in winding position.</li> <li>Buttonhole lever was not lowered when machine was placed in buttonhole mode.</li> </ul>	<ul style="list-style-type: none"> <li>Replace empty spool, and thread machine.</li> <li>Lower presser foot.</li> <li>Move bobbin winder shaft back fully to left.</li> <li>Lower buttonhole lever.</li> </ul>	26 26 26 26
	<ul style="list-style-type: none"> <li>Sewing machine will not run.</li> </ul>	<ul style="list-style-type: none"> <li>Presser foot is not correct one, and needle hits presser foot.</li> <li>Needle has come out and is in hook of machine.</li> </ul>	<ul style="list-style-type: none"> <li>Replace presser foot with correct one.</li> <li>Remove needle and insert new one.</li> </ul>	12 27
	<ul style="list-style-type: none"> <li>LCD window and/or LCD touch-screen blank or totally blue.</li> </ul>	<ul style="list-style-type: none"> <li>Contrast control has accidentally been set to wrong position.</li> </ul>	<ul style="list-style-type: none"> <li>Turn power off and then on again while touching screen.</li> <li>Adjust contrast following instructions on page 10.</li> </ul>	— 10
	<ul style="list-style-type: none"> <li>Thread breaks.</li> <li>Skipperd stitches.</li> </ul>	<ul style="list-style-type: none"> <li>Threading is not correct.</li> <li>Thread has a knot in it.</li> <li>Thread tension is not correct.</li> <li>Needle is bent or blunt.</li> <li>Needle has been inserted wrong.</li> <li>Bobbin has not been fully inserted in bobbin case.</li> <li>Bobbin case has been incorrectly threaded.</li> <li>Bobbin does not turn smoothly bobbin case.</li> <li>Needle and threads do not match.</li> <li>Thread take-up lever has not been threaded.</li> </ul>	<ul style="list-style-type: none"> <li>Correctly thread machine.</li> <li>Remove knot.</li> <li>Correct thread tension.</li> </ul>	15•16 — —
			<ul style="list-style-type: none"> <li>Replace needle.</li> <li>Properly insert needle.</li> <li>Securely install bobbin into bobbin case.</li> <li>Correctly thread bobbin case.</li> <li>Check to see that bobbin has been wound evenly.</li> <li>Use proper thread or needle.</li> <li>Check threading order.</li> </ul>	27 27 14 14 14 27 15
	<ul style="list-style-type: none"> <li>Stitches are not formed properly.</li> </ul>	<ul style="list-style-type: none"> <li>Thread has not been pulled into thread sensor guide.</li> <li>Threading is not correct.</li> <li>Bobbin case has been threaded wrong.</li> <li>Spool cap is wrong size for thread spool.</li> </ul>	<ul style="list-style-type: none"> <li>Fully pull thread into thread sensor guide.</li> <li>Correct threading.</li> <li>Correctly thread bobbin case.</li> <li>Replace the cap with correct size.</li> </ul>	15•16 15•16 14 14

	Problem	Cause (Reason)	Action to be taken	Page
	• Fabric puckers.	• Stitch length is too long for material. • Needle point is blunt.	• Decrease stitch length.	20
			• Replace needle.	27
	• Needle breaks.	• A thin needle was used for sewing haeavy-weight material. • Needle has not been fully inserted into needle bar. • Needle clamp screw is loose. • Presser foot is not correct one.	• Use correct size needle.	27
			• Properly insert needle.	27
			• Securely tighten needle clamp screw.	27
			• Use correct presser foot.	12
	• Loud noise is heard.	• Dust has accumulated in feed dogs. • Lint is in hook.	• Clean machine.	113
			• Clean machine.	113
	• The machine does not feed material.	• The stitch length has been set to zero.	• Reselect the desired stitch pattern, and proper stitch length will be set.	17
		• The presser foot pressure is too low.	• Set presser foot pressure adjustment lever to "Normal".	—
		• Feed dogs are lowered.	• Raise feed dogs.	—
	• Threading cannot be done. • The needle threader will not turn.  • The threading hook will not enter needle eye.	• The needle is not in highest position. • The needle threader is designed not to turn to protect itself if the needle is not up. • The needle has not been fully inserted into needle bar.	• Turn handwheel until needle reaches its highest position.	12
			• Properly insert needle.	27
	• Needle threader cannot be returned, and the sewing machine stops. • The threading hook is left in the needle eye.	• Sewing machine was accidentally started while threading hook was still in needle eye (during threading).	• Slightly turn handwheel clockwise and remove threader.	—
	• Sewing machine will not sew when start button is pressed.	• Speed controller has been plugged in.	• Unplug speed controller.	8

If any of the above problems should still remain after you have tried above suggestions, please contact a service center or the store where you purchased sewing machine.

## Listing of Part Number of All Accessories Included with Machine, Optional Accessories and Most Common Replacement Parts.

Parts	Parts No.
Templates ①	386950
②	386951
③	386952
④	386953
⑤	386954
Assistant marker	283425
Needle pack	386033
Wing needle	283680
Auxiliary spool pin & felt	386019
Exclusive screwdriver	283394
Seam ripper	385098
Lint brush	283403
Quilt guide	283401
Eyelet punch	283392
Circle stitch ruler	386030
Tack	386031
Screw of ruler	386032
Standard presser foot (A)	386004
Zipper foot (B)	386014
Overcasting foot (C)	386018
Blindstitch presser foot (D)	386016
Buttonhole foot (E)	386012
Decorative stitch foot (T)	386029
Rolled hemming foot (F)	386011
Invisible zipper foot (G)	386015
Cording foot (H)	386013
Transparent buttonhole foot (I)	386027
Button sewing foot	283677
Even feet foot	386020
Embroidery:	
Large embroidery frame	386955
Medium embroidery frame	386956
Small embroidery frame	386957
Embroidery foot	386959
Optional feet:	
Ruffler presser foot	386028
Pintuck foot	386022
Open toe embroidery foot	386023
Darning/embroidery foot	386017
Quilter's foot	386005
Side cutter	386001

**Note:** List of all accessories, optional accessories and following most common replacement parts.

Parts	Parts No.
Bulb	386958
Thread spool cap	385376
Small spool cap	386003
Bobbin case cover	386002
Power cord	283647
Instruction manual	386940
Needle threader hook	283075
Bobbin case	386006

Optional embroidery cards	Parts No.
SAMPLER	386045
FLOWER	386046
ANIMALS	386047
FRUIT & VEGETABLE	386049
CHRISTMAS	386050
SPORTS	386051
ZOO LEAGUE	386650
KIDS LAND	386651
MONOGRAM	386653
REAL PETS L	386654
COUNTRY & GARDEN	386796
GIGANTIC FLORAL	386797
FAIRY TALES	386795
NAUTICAL	386798
GOING PLACES	386799
SPORTS II	386800
HOLIDAY	*
COUNTRY KITCHEN	*
YOUNG CHILDREN	*

\* As of OCTOBER 1997 still under development.  
Check with your dealer for availability.

